

## Rushenberg, Tim

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**From:** Atherton, Thomas [TAtherton@boselaw.com]  
**Sent:** Thursday, April 24, 2008 11:51 PM  
**To:** Musgrave, Cheryl; Rushenberg, Tim; Wood, Barry  
**Cc:** Shaw Friedman; frank@nexustax.com; marilyn meighen  
**Subject:** Closing Comments

**Attachments:** PDF Document - Microsoft Word - Document6



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-----Original Message-----

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**Sent:** Thursday, April 24, 2008 11:49 PM  
**To:** Atherton, Thomas  
**Subject:** PDF File - Microsoft Word - Document6

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Commissioner Musgrave,

In response to your invitation to submit closing thoughts for your final consideration, I submit the following.

1. **IAAO Recognition of Chi-Square Test.** There was discussion today of whether the IAAO has recognized the Chi-Square test. It has. On pages 299-300 of the Mass Appraisal of Real Property, the Chi-square test is mentioned as test for equality of assessment between groups of property (i.e. sales chasing) as long as the expected count for each cell exceeds 5, which it does by far in all of the cases we cited.

2. **The of lack of homogeneity in Michigan Township.** While Dr. Kelly's April 16 presentation mentioned that residential properties were vastly dissimilar in Michigan Township. While we do not concur with Dr. Kelly's assertions about the impact of non-homogeneity on the Mann-Whitney test, Dr. Kelly didn't make such a representation about commercial properties. Mr. Denne has performed a sales ratio study on those commercial properties and the Mann-Whitney test shows statistically significant findings of sales chasing. Dr. Schwab could easily replicate the test.

3. **The Sensitivity of the Mann-Whitney<sup>1</sup> test, the lack of importance of differences in medians, and certain townships not being found in violation of sales chasing.** Nexus has pointed out that in some instances the median level of assessment between the sold and unsold properties does not deviate by too much. (See, e.g. page 4. of the April 16 Nexus handout, "Further please review the median % change figures by neighborhood for Michigan TWP. Virtually all neighborhoods have very similar changes.") Nexus argues that because the medians are close, sales chasing could not have taken place. But as Mr. Denne explained, sales chasing can be positively shown even when the median of sold properties does not differ at all from the median for sold properties. Simply put, the Mann-Whitney test is much more important in detecting sales chasing than comparing differences, or lack of difference in the medians of sold and unsold properties. If the Mann-Whitney was not a more meaningful tool, why would the IAAO even recommend performing the Mann-Whitney?

The explanation of why the Mann-Whitney is the touchstone for testing for sales chasing, and comparing medians is not starts with the sensitivity of the Mann-Whitney test. The Mann-Whitney test is not particularly sensitive; quite a bit of sales chasing can take place before the test will reveal sales chasing to a statistically significant degree. Overall, that's a good thing; we don't want the test to reveal a lot of false positives and find sales chasing where it does not exist. There is a concomitant downside: the lack of sensitivity also means that some "modest" sales chasing can take place without being detected by Mann-Whitney.

Sales chasing will affect the COD more readily than the median level. COD's are the average percentage deviation from the median ratio. The median levels is just what its name implies. One of the strengths of the median is that it is resistant to the pull of outliers, while averages are more subject to the influence of outliers. Therefore, it may take quite a bit of sales chasing to move the median level, because changing a few bad assessments won't move the median much. COD's are another matter and, as averages, can be moved a great deal by only a few changes. Therefore, an assessor who needs to bring his or her COD's into tolerance, may not need to move many assessments (chase many sales.) As Mr. Denne has indicated, and a little experimenting with sales ratio data will demonstrate, it is quite possible to bring COD's into tolerance and not move the median level at all. (Obviously, the smaller the sample, the fewer sales that would need to be changed to move the COD.) In fact, the Nexus April 16 memo

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<sup>1</sup> Dr. Kelly invariably refers to "the Wilcoxon (sic) Mann-Whitney test. For the sake of clarity, this is the same test that Mr. Denne and the IAAO refer to as the Mann-Whitney test. The correct spelling, however, is "Wilcoxon," not "Wilcoxon."

contains examples of how removing just one or two sales may be enough to bring non-compliant COD's into line.

With regard to the fact that not every township failed the Mann-Whitney test, one could conclude either that sales chasing did not occur, or alternatively, that the Mann-Whitney test just wasn't sensitive enough to detect a "modest amount" of sales chasing.

**4. The Law and Good Assessment Practices.** It is always a pleasure to discuss the law with an economist. In his email of this evening, Dr. Kelly sites 3 Indiana Tax Court cases.<sup>2</sup> The cases stand for the proposition, as we discussed this afternoon, that in order to overturn an assessment on appeal a taxpayer cannot simply rely on an error in the assessment, but must provide substantive evidence of the correct value of the property. For example, in *Ekerling v. Wayne Township Assessor*, the Ekerlings could not just point to the fact that the assessor used the wrong schedule to cost out their improvements. In order to win on appeal, the taxpayer had to show independent evidence of the market value in use of their property. Thus, the fact that the assessor may have used the wrong cost schedule was not enough by itself for the taxpayer to prevail. But that is a far cry from saying that in setting the assessment the assessor is free to use whatever cost schedule suits his whim, as long as the ultimate value is correct. Importantly, neither the Tax Court nor the IBTR has ever said that assessors may change fundamental property characteristics—including age, grade and condition -- without regard for the actual physical characteristics of the property.

The "disconnect of information" is in not being able to perceive the difference from carrying a burden of proof in an assessment appeal, and what constitutes good assessment practice. It is true that Indiana, like most other states, initially sets assessments based on the cost approach. It is also true that in Indiana, like most other states, if the assessor does not believe that the cost approach is an accurate reflection of value, he or she should make adjustments so that the assessed value is correct. But that does not mean, as Dr. Kelly surprisingly alleges in his email, **"that the final assessed value is the only important element of the assessment, not grade, condition or other elements."**

Indiana's assessment system starts with the physical attributes of property and estimates the cost to construct those improvement. (Replacement Cost New, or RCN). The next step in the system is to depreciate the RCN based on factors such as age, grade and condition. Finally the assessor adds in land value. If assessments set under the cost approach are to have any hope of accuracy and uniformity, it is imperative that the physical characteristics, age grade and condition, and land values be established by the assessor as accurately and honestly as possible. If at the end of that calculation the indicated value needs to be adjusted, the assessor has the authority to do so. He or she does not have the authority to change factors that have been correctly entered. Dr. Kelly, however explained in his April 16 presentation, that in some neighborhoods, Nexus adjusts one or more factors such as age, grade or condition, in order to arrive at what Nexus believes is the correct market value in use. In other cases they use different factors. On April 16, Dr. Kelly said that it doesn't matter what factor you change, as long as the bottom line is correct.

It does matter. In setting assessments it matters a great deal. It matters because an assessor must have an accurate inventory of property characteristics if there is to be any hope of correctly estimating replacement cost. It matters because if there is to be any uniformity between assessments we must be able to have a true understanding of not only the market values of properties but also their physical characteristics. It matters because accurate trending requires accurate physical information about the properties that are to be trended. It matters because as

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<sup>2</sup> The BKKM case cited by Dr. Kelly is an unpublished decision which, according to Indiana Court Rules should not be cited as authority.

an assessor attempts to model the market, he or she must know and consider the actual physical characteristics of properties.

And it matters to the integrity of the system. It matters to the public's trust in the system. Is it any wonder that so many citizens of LaPorte County have lost all faith in the assessment system when their assessor says that grade, condition, age and "other elements" are not important? If assessors treat land values – an essential part of the every assessment – as just an arbitrary, "back-filled" number to be inserted in order to keep the taxpayers from knowing why their assessments are actually being increased, the system is diminished.

Dr. Kelly has mis-quoted the Manual in a futile attempt to support his position that "the final assessed value is the only important element of the assessment, not grade condition or other elements." Dr. Kelly states, "[i]n fact page 2 of the Manual states in part that **assessors shall make whatever changes necessary to arrive at their view of the proper value.**" (Emphasis added.) The manual says no such thing. Presumably, Dr. Kelly refers to this quote that appears on page 2 of the Manual.

Although this assessment manual provides general rules for assessing property, situations may arise that are not explained or that result in assessments that may be inconsistent with this definition. In those cases the assessor shall be expected to adjust the assessment to comply with this definition and may ask the State Board to consider additional factors, pursuant to IC 6-1.1-31-5, to accomplish the adjustment.

Therefore, nothing in the manual suggests that Assessors are encouraged to make incorrect changes to grade, condition, effective age, or any other property characteristic. What IS required is that they adjust the assessment to make the "bottom line value" reflect the market value in use. There is an express column in property record cards that permits assessors to make a "market adjustment" to comply with the definition of value. Making such adjustment not only complies with the intent of the Manual, but it preserves physical characteristics of the property data in a way that permits assessors to trend assessments in future years.

5. **The Mann-Whitney test is valid, even if the sales chasing has taken place over more than one year.** No authority has been cited, and none exists for the assertion that there is any relevance to the period of time between reassessments in applying the Mann-Whitney (or any other) sales-chasing test.



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May 21, 2008

Mr. Timothy Rushenberg  
General Counsel  
Indiana Department of Local Government Finance  
Indiana Government Center North  
100 N. Senate Ave., Rm. 1058(B)  
Indianapolis, IN 46204

Dear Mr. Rushenberg:

In addition to submitting the Denne comments on Dr. Hamilton's statistical analysis, I wanted to offer these brief comments. The Department's Resolution 2008 - 0001 found a number of areas of non-performance including "compelling evidence" "that the County through its vendor may have intentionally changed assessment elements, such as effective age and land values, in order to reach a 'bottom line value'." As further explained below, neither Nexus nor the County (i) offered any evidence suggesting that they did not, in fact, manipulate property characteristics on property record cards in order to achieve a bottom-line value, nor (ii) offered any arguments that such manipulation is permitted under Indiana law.

1. At the May 15 hearing, Dr. Hamilton offered a number of statistical critiques concerning ratio studies, but so far as I can recall, Dr. Hamilton never (a) disputed that Nexus had intentionally changed assessment elements such as effective age and land values in order to reach a bottom line value; and (b) never suggested that it was good assessment practice to change assessment elements in order to reach a bottom line value. Given that Dr. Hamilton has some familiarity with IAAO standards and generally accepted assessment practices, his failure to offer any support for Nexus on the points is damning.

2. At the May 15 hearing, neither Nexus or the County presented any witness to dispute that Nexus had intentionally changed assessment elements such as effective age and land values in order to reach a bottom line value. Likewise, neither Nexus nor the County presented any witness, or cited any generally recognized authority that it was good assessment practice to change assessment elements in order to reach a bottom line value.

3. The Department's charge that Nexus manipulated assessment elements to arrive at bottom line values was fully supported by the explicit admissions of Dr. Kelly and Mr. Weunsch

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at the April 16 meeting. Therefore, it is understandable that Nexus and the County did not claim that the assessment elements had not been manipulated. But it is also crucial to note that they did not offer any evidence suggesting that their manipulation of data was justified, or that such manipulation constitutes an acceptable assessment practice. Faced with the Department's tentative findings on data manipulation and an opportunity to refute the findings, the silence of Nexus and the County on these issues is deafening.

4. It seemed clear from the April 16 statements of Mr. Weunsch and Dr. Kelly that the manipulation of assessment elements was a standard practice for Nexus and took place throughout LaPorte County. In fact, at the May 15 hearing, the County and Nexus submitted damning materials in the form of PowerPoint presentations prepared by Nexus and submitted as a part of "Tab E" of their materials. These PowerPoints seem to be a "do it yourself" text showing how Nexus did (and how other assessors should) manipulate property characteristics in order to justify a chosen value. Tab E can be seen only as evidence that, in Nexus' opinion, manipulation of property characteristics is a proper assessment technique. Given Nexus' endorsement of the "technique" in Tab E, it is appropriate to infer that Nexus has widely applied the "technique" throughout La Porte County. This is further evidence of the necessity for a county-wide reassessment.

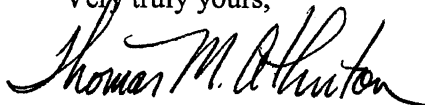
Because interim-year assessments are trended from year to year based on application of trending factors to property characteristics as reflected on property record cards, the corruption of the underlying property data will have a ripple effect for each subsequent year unless a reassessment is ordered. The pernicious impact of manipulated property record card data is manifest and must be remedied in order to provide any confidence that future year assessments are correct and that the property tax relief enacted during the 2008 session of the General Assembly applies uniformly and equally throughout the county in the years to come.

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For the foregoing reasons, and for the reasons explained in the vast array of materials submitted to the Department throughout the course of the Department's proceedings, we request, on behalf of Mr. Wendt, that:

- (a) the Department order a complete reassessment of La Porte County;
- (b) an experienced, independent contractor rather than Nexus conduct the reassessment;
- (c) the independent contractor be directed to assume responsibility over the initial level of appeals instead of the La Porte County PTABOA; and
- (d) to the extent permitted by law, that the current La Porte County Assessor be relieved of her duties.

Very truly yours,



Thomas M. Atherton

TMA:mp

1143829

STATE OF INDIANA )  
 )SS:  
COUNTY OF LA PORTE )

LA PORTE SUPERIOR COURT NO. 2

CAUSE NO.: 46D02-0709-PL-129

MICHAEL CONNOR, LINDA O'MAHONEY,  
DONALD LAYELLE, JOHN T. MCKITRICK, et al.

Plaintiffs,

v.

CAROL MCDANIEL, individually and as Assessor of  
La Porte County, Indiana, NEXUS GROUP, INC.,  
FRANK S. KELLY, and JEFFREY WUENSCH.

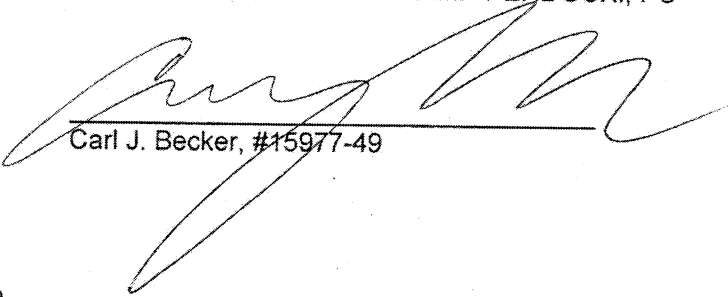
Defendants.

**MOTION TO DISMISS COMPLAINT  
FOR DECLARATORY JUDGMENT AND DAMAGES**

Defendants Nexus Group, Inc., Frank S. Kelly, and Jeffrey Wuensch, by counsel,  
pursuant to Rule 12(B) of the Indiana Rules of Trial Procedure, move for the dismissal of the  
Plaintiffs' Complaint For Declaratory Judgment and Damages. In support of this Motion,  
Defendants Nexus Group, Frank S. Kelly, and Jeffrey Wuensch, submit the accompanying Brief  
In Support.

Respectfully submitted,

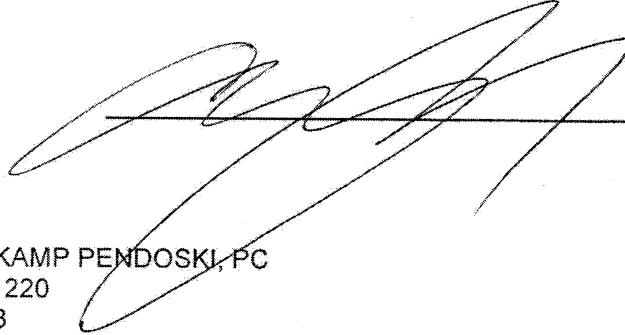
NEWTON BECKER BOUWKAMP PENDOSKI, PC

  
Carl J. Becker, #15977-49

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3755 East 82<sup>nd</sup> Street, Suite 220  
Indianapolis, IN 46240-4000  
(317) 598-4529 [Fax: 598-4530]

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a copy of this motion has been served, via U.S. Mail, First-Class, postage prepaid, this 1<sup>st</sup> day of November, 2007, on the following: Mark Phillips and Bradley Adamsky, Newby, Lewis, Kaminski & Jones, LLP, 916 Lincolnway, PO Box 1816, La Porte, IN 46350; and Shaw Friedman, Friedman & Associates, 705 Lincolnway, La Porte, IN 46350.

A large, stylized handwritten signature in black ink, written over a horizontal line. The signature is cursive and appears to read 'Newton B. Pendoski'.

NEWTON BECKER BOUWKAMP PENDOSKI, PC  
3755 East 82<sup>nd</sup> Street, Suite 220  
Indianapolis, IN 46240-2423  
(317) 598-4529 [Fax: 598-4530]

STATE OF INDIANA )  
COUNTY OF LA PORTE )

) SS:

LA PORTE SUPERIOR COURT NO. 2

CAUSE NO.: 46D02-0709-PL-129

MICHAEL CONNOR, LINDA O'MAHONEY,  
DONALD LAYELLE, JOHN T. MCKITRICK, et al.

Plaintiffs,

v.

CAROL MCDANIEL, individually and as Assessor of  
La Porte County, Indiana, NEXUS GROUP, INC.,  
FRANK S. KELLY, and JEFFREY WUENSCH.

Defendants.

**BRIEF IN SUPPORT OF MOTION TO DISMISS  
COMPLAINT FOR DECLARATORY JUDGMENT AND DAMAGES**

Defendants, Nexus Group, Inc., Frank S. Kelly, and Jeffrey Wuensch, by counsel, Carl J. Becker, submit this Brief in support of the Motion To Dismiss Complaint For Declaratory Judgment and Damages filed contemporaneously herewith.

**FACTS**

1. On June 24, 2004, the Defendant Nexus Group, Inc. ("Nexus") entered into a Professional Services Agreement ("Services Agreement") with the LaPorte County Commission, on behalf of the County Assessor of LaPorte County, Indiana. Complaint For Declaratory Judgment and Damages ("Complaint") paragraph 12.
2. The Services Agreement required Nexus to assist the County Assessor with the general reassessment required under Indiana law. Complaint paragraph 9, 12 and Exhibit A to the Complaint.
3. Defendants, Frank S. Kelly and Jeffrey Wuensch ("Kelly and Wuensch") did not execute the Services Agreement in a personal capacity but rather in their capacity as officers of Nexus. Complaint paragraph 12 and Exhibit A to the Complaint.

4. Plaintiffs do not seek the return of taxes paid by them. Complaint: Prayers for Relief.
5. In the present cause of action, Plaintiff, seeks:
  - a. That the Defendants, by their failure to properly solicit bids for the services described in Exhibit "A" have engaged in restricting competition in violation of Ind. Code § 24-1-2-3;
  - b. That, Exhibit "A" is illegal and void;
  - c. That all services provided by Nexus under Exhibit "A" are deemed null and void;
  - d. That Defendant Nexus must jointly and severally repay to the taxpayers of La Porte County, Indiana all sums paid or to be paid under Exhibit "A";
  - e. That Defendants should be ordered to pay all fees and expenses of Plaintiffs;
  - f. That Defendant McDaniel should be made to repay to the treasury of LaPorte County, Indiana, all sums paid to Nexus; and
  - g. Imposition of Punitive damages against all Defendants.

### **LAW AND ANALYSIS**

#### **I. Expressio Unis Est Exclusion**

Ind. Code § 6-1.1-4-17 and 18, on which Plaintiff bases its Complaint and all requests for relief herein, reads in pertinent part as follows:

#### **IC 6-1.1-4-17**

(a) Subject to the approval of the department of local government finance and the requirements of section 18.5 of this chapter, a:

(1) township assessor; or

(2) group consisting of the county assessor and the township assessors

in a county;

may employ professional appraisers as technical advisors.

....  
(b) After notice to the county assessor and all township assessors in the county, a majority of the assessors authorized to vote under this subsection may vote to:

(1) employ a professional appraiser to act as a technical advisor in the county during a **general reassessment period**;

...  
... Subject to the limitations in section 18.5 of this chapter, the assessor or assessors appointed under subdivision (2) may contract with a professional appraiser employed under this section to supply technical advice during a **general reassessment period** for all townships in the county. A proportionate part of the appropriation to all townships for assessing purposes shall be used to pay for the technical advice.

#### IC 6-1.1-4-18.5

(a) A township assessor, a group of township assessors, or the county assessor may not use the services of a professional appraiser **for assessment or reassessment purposes** without a written contract. ....

(b) No contract shall be made with any professional appraiser to act as technical advisor in the **assessment** of property, before the giving of notice and the receiving of bids from anyone desiring to furnish this service. ... The contract shall be awarded to the lowest and best bidder who meets all requirements under law for entering a contract to serve as technical advisor in the **assessment** of property. However, any and all bids may be rejected, and new bids may be asked.

(c) The county council of each county shall appropriate the funds needed to



meet the obligations created by a professional appraisal services contract which is entered into under this chapter.

(emphasis added)

In applying Ind. Code § 6-1.1-4-18.5, the court can look to the principle of "Expressio unis est exclusio" which means "the enumeration of certain things in a statute necessarily implies the exclusion of others," a maxim which is clearly recognized in Indiana Courts. Security Trust Corporation v. Estate of Fisher, 797 N.E.2d 789, 794 (Ind.Ct.App. 2004). In Ind. Code § 6.1.1-4-18.5(a) the statute states that "A township assessor, a group of township assessor, or the county assessor may not use the services of a professional appraiser for the assessment or reassessment purposes without a written contract..." In § 18.5(b) the statute states "No contract shall be made with any professional appraiser to act as a technical advisor in the assessment of property before the giving of notice and the receiving of bids from anyone desiring to furnish this service."

It is clear that the second section, 18.5(b) was only intended to cover assessment, not reassessment. Throughout Ind. Code Chapter 4, the terms **assessment** and **reassessment** are consistently used either (i) together in concert, or (ii) separately. See for example : Ind. Code § 6.1.1-4-4 (b), 4.5(b), 5(a), 6, 9, 12 (f) and (h), 12.4 (b) and (c), 13 (a), 13.8 (g), 14 (a) and (b), 15 (a), 16 (a), 20, 21 (a) and ( b), 22 (a), 24, 25 (a), 26, 27.5 (a) and (b), 30, 31, 31.5, 31.6 (b)(3-7), (c), (f), (h) and (i), 31.7 (b), (c)(3)(B), (d)(3), and (h).

It is clear that if the legislature had intended to include **reassessment** in § 18.5(b), the language would specifically state the word **reassessment**. In all other sections of the statute where both terms were intended to apply, both terms were stated. In those sections where only one of the terms was pertinent, only the one term was used.

This is where the maxim applies: all through the statute the two terms are either used together or separately. When a single term is enumerated alone, the intent is for the stated term to apply singularly not in concert with the other term. The commonly cited limitation on the

use of this maxim is "The maxim is to be used only as an aid in arriving at the legislative intent." Id. (Citing Brown v. State, 774 N.E.2d 1001, 1006 (Ind.Ct.App. 2002) (citations omitted). This limitation does not apply in this case for the maxim is a perfect direct aid in applying the overwhelmingly clear legislative intent throughout Ind. Code § 6.1.1-4-1 et. seq. including specifically Ind. Code § 6.1.1-4-18.5.

In the instant case, the Services Agreement obligated Nexus to assist the County Assessor with the general reassessment required under Indiana law. Complaint paragraph 9, 12 and Exhibit A to the Complaint. As required under Ind. Code § 6-1.1-4-18.5 (a), a written contract was utilized by the County Assessor through the Commissioners to obtain professional services to assist with the general reassessment. Ind. Code § 6-1.1-4-18.5 (b) simply does not apply to the Services Agreement as such was not for assessment but rather for reassessment. As such, no bids were required and the Services Agreement is effective, legal, and binding.

## **II. Public Contract**

The Services Agreement between the County Assessor and Nexus is not a public contract, and as such was not subject to the formal bidding procedures required pursuant to Ind. Code § 6-1.1-4-18.5. That section states "[n]o contract shall be made with any professional appraiser to act as technical advisor in the assessment of property, before the giving of notice and the receiving of bids from anyone desiring to furnish this service." Ind. Code § 6-1.1-4-18.5(b).

"As a general rule, contracts for personal or professional services entered into by a public body with a private organization or individual are not governed by public competitive bidding laws and need not be submitted for public competitive bids. (Citation omitted). Applying this general rule to public works contracts, its rationale is that competitive bidding laws are applicable to public works construction contracts only where the material and work must conform to specifications allowing the performance of

the contract to be measured by relatively objective standards. Consequently, it is presumed that the legislature intended the lowest price to be the ultimate determining factor in awarding the contract. However, with public contracts calling for **professional and/or personal services** requiring aesthetic, business or **technical judgment**, and/or **professional** or scientific **skills and experiences**, it is assumed that the legislature could not have intended the lowest price to be the ultimate determining factor as the performance of the contract can not be evaluated objectively. (Footnote omitted) Because the nature of personal and/or professional service contracts makes it unlikely that bids would provide any advantage to the public body in awarding the contract, advertising for such bids would be undesirable, impossible or impractical. (Citation omitted.) (Emphasis added)

Attlin Construction, Inc. v. Muncie Community Schools, 413 N.E.2d 281,287 (Ind.Ct. App. 1980).

Conversely, "procurement of personal services such as architectural and engineering, legal, and investment banking services are not included within the scope of the Public Purchasing Statute and, therefore, not subject to it." Shook Heavy and Environmental Construction Group v. City of Kokomo, 632 N.E.2d 355, 357 (Ind. 1994). "In general, only supplies, goods, machinery, packaged software, and equipment must be acquired through competitive bids." Id. Services are defined as "the furnishing of labor, time, or effort by a person, not involving the delivery of specific supplies other than printed documents or other items that are merely incidental to the required performance." Ind. Code § 5-22-2-30. When purchasing services, the purchasing agency of a governmental body may use any procedure it considers appropriate. Ind. Code § 5-22-6-1.

In the instant case, the Service Agreement was for consultation services for the general reassessment, and was made between the County Assessor and Nexus due to Nexus being a specialized and highly qualified provider of advice and recommendations in this area. The

services included were Nexus' time, labor and effort pursuant to their specialized knowledge and in their capacity as experts, and did not involve the exchange of supplies or creation or exchange of any goods or equipment. This was not merely a contract requiring basic inspection and assessment of physical property. Accordingly, the subject of the Services Agreement was for assistance and guidance in the reassessment process. Thus, the Services Agreement was for the purchase of services and the County was permitted to use any procedure it deemed appropriate in order to obtain them.

### **III. Failure to Exhaust Administrative Remedies**

Ind. Code 34-13-3-13 provides:

"A person may not initiate a suit against a governmental entity unless the person's claim has been denied in whole or in part."

This statute, and the concept set forth therein, has long been held under Indiana law to require plaintiffs to exhaust the administrative remedies available to them. State v. Sproles, 672 N.E.2d 1353, 1358 (Ind. Tax 1996); County Board of Review of Assessments for Lake County v. Kranz, 66 N.E.2d 896, 897 (Ind. 1946).

By the Plaintiffs' prayer for relief, it is apparent the Plaintiffs seek to overturn the reassessment values which were established by the County Assessor with the assistance of Nexus. By requesting all work of Nexus to be declared "null and void" and not simply requesting the repayment of taxpayer monies, Plaintiffs are attempting to circumvent the appropriate mechanism for challenging a valuation. See Complaint, Prayer for Relief in Count I. If Nexus' work is declared "null and void", then the basis for the County Assessor's valuations would be significantly compromised and would result in the County assessor being required to return to prior assessments pending new studies.

In another case involving a taxpayer attempting to pursue a class action over reassessment, the Appellate Court very eloquently stated

"Because of Cooper's [the plaintiff] immediate appeal to the courts, however, an opportunity was never given this administrative agency to review the reassessment.... Cooper expresses further discontent with the existing statutory remedies on the theory that he is bringing a class action on behalf of himself and others situated, not in his role as an individual to protect his own interest but to prevent damage to the public and protect their financial interest in the taxing district. This is damage which is sustained generally and not specifically and, therefore, existing channels are inadequate to protect this interest. He cites no persuasive authority, Indiana or otherwise, for this position. The existing statutory procedures are, in our opinion, adequate to attain the broad objective sought by Cooper. **We will not serve as a midwife to the birth of yet another remedy for which we see no need or necessity.** (Emphasis added)

Cooper v. County Board of Review of Grant County, 276 N.E.2d 533, 538-539 (Ind. Ct. App. 1971)

The proper means to challenge a valuation in cases such as the one at bar require a taxpayer to file a Form 133 petition with the Property Tax Assessment Board of Appeals. If the taxpayer disagrees with the Board's decision, the taxpayer may appeal to the division of appeals for a final administrative determination. Ind. Code § 6-1.1-15-12. Until this process is completed, however, this Court does not have subject matter jurisdiction over this suit. Due to the Plaintiffs' immediate appeal to this Court, an opportunity was not given to the appropriate administrative agency to review any reassessments or procedural irregularities. This Court should not look beyond the implicit goal pursued by Plaintiffs, a change in their reassessed values. This goal has its own administrative remedies.

#### **IV. Standing: Improper Request for Relief**

Alternatively, even if the Plaintiffs are considered to have standing as taxpayers, the Plaintiffs' prayer for relief seeks to invalidate the contract at issue and return to the Plaintiffs

damages in an amount equivalent to monies received by the Defendants pursuant under the Services Agreement. The Plaintiffs are not seeking the direct return of tax monies paid by them.

Such relief is improper for the type of suit contemplated by the statute conferring taxpayer standing. See Ind. Code § 34-6-2-124. The suit is brought for money damages under the guise of a return of a refund of monies paid for services performed by Nexus. In addition public lawsuit are for the purpose of pursuing such governmental entities as the County Assessor, not an individual, corporate or otherwise.

Thus, the suit has been improperly pled against Nexus, Kelly and Wuensch and must be dismissed. Brademas v. St. Joseph County Com'rs, 621 N.E.2d 1133 (Ind.Ct.App. 1993).

**V. Improper Forum: Lack of Subject Matter Jurisdiction**

Defendants Nexus, Kelly and Wuensch hereby incorporate by reference as if fully restated herein Section II. Lack of Subject Matter Jurisdiction / Tax Court Has Jurisdiction of Defendant Carol McDaniel's Motion to Dismiss filed herein on or about November 12, 2007. See also Hecht v State of Indiana, 853 N.E.2d 1007 (Ind.App. 2006).

In addition thereto, Defendants Nexus, Kelly and Wuensch would restate that it is apparent the Plaintiffs seek to overturn the reassessment values which were established by the County Assessor with the assistance of Nexus through the Services Agreement. By requesting all work of Nexus to be declared "null and void" and not simply requesting the repayment of taxpayer monies, Plaintiffs are attempting circumvent the appropriate mechanism for challenging a valuation. See Complaint, Prayer for Relief in Count I. If Nexus' work is declared "null and void", then the basis for the County Assessor's valuations would be significantly compromised and would result in the County assessor being required to return to prior assessments pending new studies. This Court should not look beyond the actual goal pursued by Plaintiffs, which is more appropriately placed under the jurisdiction of the Indiana Tax Court.

## VI. Failure of Type of Injury

Plaintiffs allege the Defendants have violated Ind. Code § 24-1-2-3, or the Indiana Antitrust Act. See Complaint, Prayer for Relief in Count I. This statute "makes unlawful acts which operate to restrain open and free competition in bidding to obtain contracts for private or public work." City of Auburn through Bd. Of Public Works and Safety v. Mavis, 468 N.E.2d 584, 585 (Ind.Ct.App. 1984). It is on the basis of this statute the Plaintiffs seek damages.

"The purpose of the antitrust act is to:

'... prevent fraud and collusion in the letting of contracts and to protect trade and commerce against unlawful restraints and monopolies. To accomplish these ends the legislature has seen fit to incorporate into the statute different remedies and drastic measures for the punishment of those who violate its provisions, and for the relief of those who suffer on account thereof.' Royer v. State ex rel. Brown (1916) 63 Ind. App. 123, 112 N.E.2d 122 (Ind.App 1916). As the United States Supreme Court held in Brunswick v. Pueblo Bowl-O-Mat, Inc. 429 US 477, 489 97 S. Ct. 690, 697, 50 L.Ed 2d 701, plaintiffs must prove an: '... injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful. **The injury should reflect the anticompetitive effect either of the violation or of anticompetitive acts made possible by the violation.** It should, in short, be 'the type of loss that the claimed violations ... would be likely to cause.' Zenith Radio Corp. v. Hazeltine Research, 395 U.S [100] at 125, [89 S.Ct. 1562, 1577, 23 L.Ed. 129]."

(Emphasis added)

Id. At 586

In the instant case, no such anticompetitive effects to the Plaintiffs occurred. Nexus' work under the Services Agreement was used only as advice for the County's benefit. This contract is for services of a technical nature. Any deleterious effect the contract or its price had on the taxpayers is solely a result of the County's decision to reassess taxpayers' property at

the level they deemed appropriate. It was not a product of the price of the Services Agreement or Nexus' services.

Plaintiffs argue the failure of a bidding process impacted them through the price of the Services Agreement. However, Plaintiffs do not allege they would have sought to bid or been capable of bidding. Thus, their claims bear only an incidental relation to the alleged anticompetitive behavior and are not sufficient under the Antitrust Act. Berghausen v Microsoft Corporation, 765 N.E.2d 592, 597 (Ind.App. 2002). As such, even if the Services Agreement is considered to be in violation of the Antitrust Act, the injury claimed by the Plaintiffs does not arise from any anticompetitive effect to the Plaintiffs. Nexus is therefore not responsible for any damages pursuant to Ind. Code § 24-1-2-3.

#### VII. Laches

Defendants Nexus, Kelly and Wuensch hereby incorporate by reference as if fully restated herein Section V. Laches of Defendant Carol McDaniel's Motion to Dismiss filed herein on or about November 12, 2007.

In addition thereto, Defendants Nexus, Kelly and Wuensch would provide that the inexcusable delay is also buttressed by the fact the County Assessor, as an elected government official, would have been required to provide information on any contracts which her Office might have when requests for such information were made. Three years has passed, the Services Agreement was available for review at any time over this period, and payments under the Services Agreement have been made which would require approval by the County Commissioners. Such inaction by the Plaintiffs until they were aware of their reassessments shows inexcusable delay and implied waiver from knowing acquiescence.

The prejudice to Nexus is obvious. Due to the work performed for the County Assessor, it can be assumed Nexus has foregone significant other work to its significant financial detriment. Rather than being allowed to count on the County continuing to abide by the terms of the Services Agreement, Nexus is now asked to repay the money it has earned through its



services and to suffer the result of not having an opportunity to obtain work during these past years.

#### **VIII. Estoppel**

In addition to the elements of laches set forth in Section V. Laches of Defendant Carol McDaniel's Motion to Dismiss, estoppel has the additional element of reliance by the defendant.

In the instate case, it is implicit from the work performed by Nexus over the last three years that it had relied on the Services Agreement and the process by which the contract was put in place by the County. In addition to the substantial work performed by Nexus, it has also foregone significant other work to its significant financial detriment. It is clear Nexus has relied, to its detriment, on the Services Agreement which is sought to be invalidated at this late date and, thus, Plaintiffs should be estopped from pursuing these claims.

#### **IX. Failure of Elements of Conspiracy**

One of the required elements of a conspiracy and as plead in Count III of the Plaintiffs' Complaint is knowledge of the illegality of the act, which in this case would be the requirement for bids for the employment of an appraiser/technical adviser under Ind. Code § 6-1.1-4-18.5.

First, as demonstrated by the arguments above, it was Nexus' understanding that the type of contract resulting in the Services Agreement was specifically outside of any bidding structure. Nexus has demonstrated the existence of ample information based upon the state of the law, including the Attorney General Opinion and wording of the statute on which Plaintiffs rely, to have no such knowledge of an illegality implied to them.

Second, even if the contract was one for which bidding was required, Nexus was not responsible for the bidding structure, publication, or process. This is clearly with the framework of the County Assessor and the Commissioners. Nexus did not have the ability or the authority

to require such bidding. As such, it could not have "purposely" as alleged by the plaintiffs have designed to deprive monies from the taxpayers of LaPorte County.

**X. Kelly and Wuensch: Acting Only in Representative Capacity**

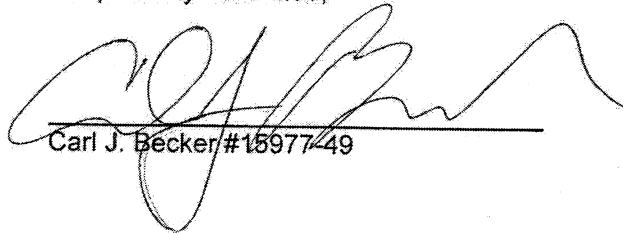
Although Plaintiffs have alleged that both Kelly and Wuensch are personally liable for any wrongdoing Nexus may have committed, the individual members of Nexus are not personally liable for acts undertaken by the company. "...a corporation is a legal entity separate and distinct from its shareholders and officers." Indiana Dept. of Transportation v. McEnergy, 737 N.E.2d 799, 803 (Ind.Ct.App. 2000). Generally, personal liability of corporate officers and shareholders is determined by common law rules of agency. Id. at 802. Accordingly, if a corporate officer's or director's actions in entering into a contract on the principal's behalf and thereafter are within the scope of the officer's official duties, the officer will not be held personally liable. Martin v. Platt, 386 N.E.2d 1026, 1027 (Ind.Ct.App. 1979). Although a corporation acts solely through its agents, officers, and directors, "it is the corporate entity that is legally responsible for those acts." McEnergy, 737 N.E.2d at 803.

In the instant case, Kelly and Wuensch entered into the contract at issue with the LaPorte County Commissioner's office within their capacity as President and Chief Operating Officer respectively. These designations are clearly set forth on the Services Agreement. Entering into the Services Agreement was entirely within the scope of their employment and was taken pursuant to their duties as corporate officers to engage in business as assessors and consultants. The Services Agreement is legal and binding in its form and content and was directly related to Nexus' role and purpose as a corporate entity. Accordingly, the action taken by Kelly and Wuensch in entering into said contract was legal, within the scope of their employment, and thus they cannot be held personally liable for said actions.

**CONCLUSION**

For all of the foregoing reasons asserted herein, Defendants, Nexus Group, Inc., Frank S. Kelly, and Jeffrey Wuensch would respectfully request that this Court enter an Order dismissing Plaintiffs' Complaint for Declaratory Judgment and Damages as filed herein on September 13, 2007, with prejudice, and for any and all other relief just and proper in the premises.

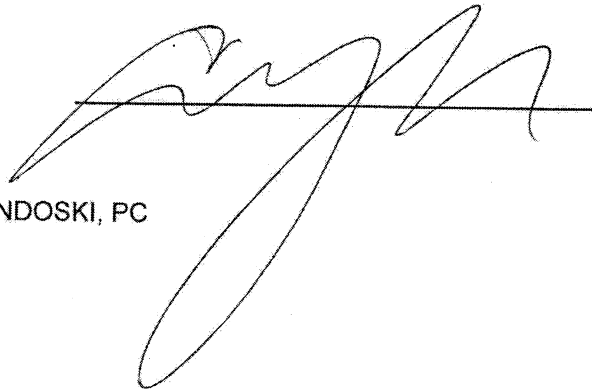
Respectfully submitted,



Carl J. Becker #1597749

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a copy of this motion has been served, via U.S. Mail, First-Class, postage prepaid, this 14 day of November, 2007, on the following: Mark Phillips and Bradley Adamsky, Newby, Lewis, Kaminski & Jones, LLP, 916 Lincolnway, PO Box 1816, La Porte, IN 46350; and Shaw Friedman, Friedman & Associates, 705 Lincolnway, La Porte, IN 46350.



NEWTON BECKER BOUWKAMP PENDOSKI, PC  
3755 East 82<sup>nd</sup> Street, Suite 220  
Indianapolis, IN 46240-2423  
(317) 598-4529 [Fax: 598-4530]

**PROFESSIONAL SERVICES AGREEMENT: DRAFT**

24 This SERVICE AGREEMENT (the "AGREEMENT") is made and entered into as of this day of June 2004 by and between Nexus Group, Inc. ("Nexus") and the LaPorte County Commission, on behalf of County Assessor of LaPorte County, Indiana ("Client").

**RECITALS:**

Whereas, Nexus operates a tax research and consulting firm based in Indiana and has certain skills and expertise in regards to the services to be performed;

Whereas, Client desires to retain the benefit of Nexus's service, knowledge, skills and expertise in certain specified areas of Indiana property taxation; and

Whereas, Client and Nexus are desirous of documenting the terms and conditions of said relationship;

The foregoing recitals are adopted by the parties as being true and accurate statements, and are hereby incorporated as binding representations of this Agreement. Now, therefore, in consideration of the premises and the mutual covenants, agreements and representations herein contained, and other good and adequate consideration, the receipt of which is hereby acknowledged, it is hereby agreed as follows:

1. **Engagement.** Client hereby engages Nexus as a service provider, consultant and advisor to the Client with respect to the matters identified in Section 2 hereof and in Attachment 1 to this AGREEMENT for the compensation as set forth in Section 3 hereof and for the term as set forth in Section 5 hereof. Nexus hereby accepts this engagement by Client as a service provider, consultant and advisor with respect to such matters and for such compensation and term.
2. **Services to be Performed.** During the term of this AGREEMENT, Nexus shall provide verbal and/or written reports, communications, data analysis and other related and necessary information ("Services") to the Client in general regards to property class ratio studies, income analysis, neighborhood delineations, neighborhood factors, land valuation as may be desired by the Client, for all property classes (vacant and improved) on a delivery schedule mutually agreeable to both Client and Nexus. These Services and deliverables are further outlined and detailed in Attachment 1 to this AGREEMENT. Client and Nexus may alter the scope and nature of the Services upon mutual agreement. Nexus shall work closely with Client to ensure that Nexus completes those Services necessary so that Client meets all statutory deadlines. Nexus agrees to work in conjunction with the Client and other service providers, including but not limited to those associated with the reassessment and/or software provision, to integrate and transfer information

so as to provide information to the Client in a uniform format. All work product of Nexus shall meet the requirements as established by the Department of Local Government Finance consistent with Regulation 17 as detailed in Version A of the 2002 Real Property Assessment Manual, any subsequent alterations to this document, as well as pertinent and other related adopted rules.

3. **Compensation.** In consideration for the Services as described in Section 2 hereof Nexus shall receive the following sums:

April __, 2004 to March 31, 2005	-	\$189,000.00
April 1, 2005 to March 31, 2006	-	\$219,000.00
April 1, 2006 to March 31, 2007	-	\$219,000.00
April 1, 2007 to March 31, 2008	-	\$219,000.00
April 1, 2008 to March 31, 2009	-	\$219,000.00

Invoices shall be submitted to Client in conjunction with work logs, activity sheets and similar for Client review and approval at quarterly intervals. Invoices are to be paid within 60 days of receipt. Additional services outside the scope of those in Attachment 1 may only be performed with written approval by the Client, and with that approval, shall be invoiced at the rate of \$700 per day. These provisions are subject to appropriation by the LaPorte County Council. Invoice per Client approval of work.

4. **On-Site Presentations and/or Defense.** Nexus agrees to provide public presentations, defend and/or support any aspect of these Services in any forum, public or private, as deemed necessary by the Client.
5. **Term, Termination and Suspension.** Subject to termination or suspension as described herein, the term of this AGREEMENT shall commence on the earliest date referenced herein and continue for a six- year period. Either party may cancel this AGREEMENT at any time with thirty (30) days notice and for good and just cause. Client may suspend or terminate the provision of Services at their sole discretion for good and just cause (such as untimely and/or inadequate performance, reassessment delay by the Governor, State Legislature, Indiana Tax Court, and/or Indiana Supreme Court). In the event of a suspension of Service provision, the payment of any and all outstanding compensation due and payable in Section 3 shall likewise be suspended. At the resumption of Services, Nexus and Client would make a good faith effort to amend this Agreement concerning due dates for deliverables and a compensation schedule.
6. **Confidentiality.** Nexus shall maintain the confidentiality of all Client records, data, information, correspondence of any type and similar. All information related to these Services shall be provided to the Client only, unless otherwise directed by Client, or as so directed by a Court of Law.

7. **Independent Contractor.** Nexus shall at all times be an independent contractor hereunder, rather than a coventure, agent, employee or representative of the Client. Client hereby acknowledges and agrees that Nexus may engage directly or indirectly in other business and ventures not otherwise proscribed hereby.
8. **Proscribed Activities.** Nexus or its shareholders shall not file any type of real or personal property appeal on behalf of any person(s), corporations or business entities in regards to property owned, held or possessed in LaPorte County, Indiana.
9. **Governing Law.** The AGREEMENT shall be construed in accordance with the laws of the state of Indiana.
10. **Waiver of Breach.** The waiver of any breach of any provision of this Agreement or failure to enforce any provision hereof shall not operate or be construed as a waiver of any subsequent breach by either party.
11. **Entirety.** This AGREEMENT represents the complete and final agreement of the parties with respect to delivery of Services and shall control over any other statement, representation or agreement. Any changes to the Agreement must be in writing, signed by both parties.
12. **Survival.** The provisions of this AGREEMENT relating to confidentiality shall survive the termination of the AGREEMENT.
13. **Captions.** The captions of this AGREEMENT are for convenience of reference only and shall not be deemed to define or limit any of the terms hereof.
14. **Binding Effect.** This AGREEMENT shall inure to the benefit of both parties and their successors and assigns shall be binding upon both parties.
15. **Indemnification.** Both Client and Nexus agrees to indemnify, defend and hold harmless the other from and against any and all costs, expenses and liability, including, but not limited to, reasonable attorney fees, which it may incur in the event of a breach by the other party of its obligations hereunder or arising from acts or omissions of the other party in performing its obligations hereunder.
16. **Contract Representative.** Each party may designate a Contract Representative to serve as the primary contact person for notifications and receipt and/or coordination of Services. The Nexus Contract Representative shall be Frank S. Kelly, 4225 N. Illinois Street, Indianapolis, IN 46208 (317-

925-7783). The Client Representatives shall be Carol McDaniel for all matters.

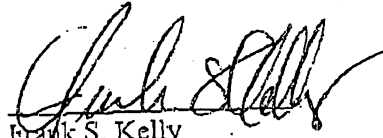
17. **Notices.** All written notices shall be directed, if to Nexus, at: 4225 N. Illinois St., Indianapolis, IN 46208; and if to Client, at: LaPorte County Courthouse, 813 Lincolnway, Suite 201, LaPorte, Indiana 46350.
18. **Responsibilities.** The final determination of assessed value and true tax value is and shall remain the Client's responsibility.
19. **Non-Discrimination.** Pursuant to IC 22-9-1-10, Nexus and its subcontractors, if any, shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Contract, with respect to the individual's hire, tenure, terms, conditions, or privileges of employment, because of the individual's race, color, religion, sex, handicap, national origin or ancestry. Breach of this covenant may be regarded as a material breach of contract.
20. **Delays.** Whenever Nexus or the Client have knowledge that any actual or potential situation is delaying or threatens to delay the timely performance of this Contract, they shall within fifteen (15) days provide written notice of the delay to the other party by certified mail, return receipt requested, including all relevant information with respect to the actual or potential cause of the delay.
21. **Subcontracting.** Nexus must obtain the written approval of the Client before subcontracting all or any portion of this Contract. This limitation shall not apply to the purchase of standard commercial supplies or raw materials. If subcontractors are used, Nexus is responsible for contract performance, compliance with terms and conditions of this Contract, and the requirements of federal and state equal opportunity and affirmative action statutes, rules and regulations.
22. **Force Majeure.** Neither party shall be liable for delays or performance failures resulting from and caused by acts beyond the party's control. Such acts shall include acts of God, acts of war, epidemics, communication line failures, power failures, earthquakes, and other similar disasters. In every case the delays must be beyond the control and without the fault or negligence of the non-performing party.
23. **Maintaining A Drug-Free Workplace.** Nexus hereby covenants and agrees to make a good faith effort to provide and maintain during the term of this Contract a drug-free workplace, and that it will give written notice to the Client within ten (10) days after receiving actual notice that an employee of the Professional Appraiser has been convicted of a criminal drug violation occurring in Professional Appraiser's workplace. It is further expressly

agreed that the failure of Nexus to in good faith comply with the terms of the above, or falsifying or otherwise violating these terms shall constitute a material breach of this Agreement, and shall entitle the Client to impose sanctions against Nexus including, but not limited to, suspension of contract payments, termination of this Agreement and/or debarment of Nexus from doing further business with the Client for up to three (3) years.

In witness whereof, the undersigned have executed this AGREEMENT effective as of the day and year first set forth above.

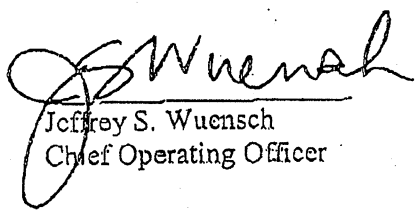
"Nexus"

By:

  
Frank S. Kelly  
President

Date 9-7-04

By:

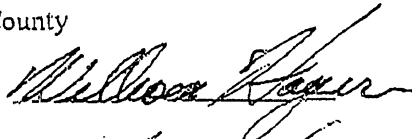
  
Jeffrey S. Wuensch  
Chief Operating Officer

Date 9-7-04

"Client"

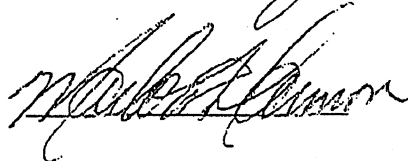
LaPorte County

By:



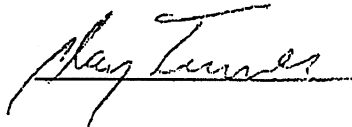
Date 6/24/04

By:



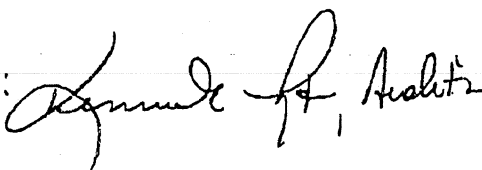
Date 6/24/04

By:



Date 6/24/04

Attest:

 6/24/04



## Attachment 1 Nexus Group Deliverables

Year 1: 2004-05

1. Annual update of LaPorte County Ratio Study (medians, COD's and other statistics as needed).
2. Provide technical support to the County Assessor and Property Tax Assessment Board of Appeals (PTABOA) on all issues.
3. Provide technical support to the County Assessor, PTABOA and to *Meighen & Associates* in regards to appeals (property inspections, data collection, income analysis, expert witness testimony, etc.).
4. Review all existing neighborhood designations, suggest reclassifications, and determine appropriate, updated neighborhood factors. This process would begin with the neighborhoods demonstrating the most serious assessment issues.
5. Land Valuation for all improved and unimproved property classes by property class, area, use and township as appropriate. This included on-site inspections of vacant land sales, extraction of values from improved sales, and/or site valuations as needed.
6. Income/expense information will be collected, sorted, compiled, and implemented to assessments as appropriate. This data will also be used to consider appeals. Capitalization and vacancy rates will be determined. Our initial targets are commercial properties where income capitalization provides a better estimate of value.
7. Residential improvements in areas where the neighborhood factor is deemed high and areas where significant residential-type rental property exists will be data-collected and reviewed in both cost-based assessment and income-based methods.
8. Annual re-examination of all commercial & industrial property with obsolescence.

Years 2-5: 2005-09

In addition to the above-listed items:

9. Beginning in 2005, revisit all commercial & industrial property for any changes in use or other pertinent data in the following manner:

2005: One-Fourth of all Commercial and Industrial Property

2006: One-Fourth of all Commercial and Industrial Property

2007: One-Fourth of all Commercial and Industrial Property

2008: One-Fourth of all Commercial and Industrial Property

9. Update and/or correct lot sizes, property addresses, plat maps and other parcel characteristics.

# **Commercial & Industrial Cost Schedules**

**Appendix G, Pages 12-43\***

**March 1, 2006 Assessment Date**

**LaPorte County, Indiana**

\*These updated cost tables for the March 1, 2006 assessment date were developed by Nexus Group (Nexus). The Nexus Construction Cost Index<sup>sm</sup>(CCI) relies on cost indices generated by the U.S. Bureau of Labor Statistics, insurance companies, state-specific construction cost indices published by state agencies, internet resources, income & expense data, appraisals obtained via hearings in Indiana, and actual construction costs provided by Indiana taxpayers. All materials are subject to copyrights of Nexus are protected by the Copyright Law of the United States. Technical information including methods, processes, formulae, compositions, techniques, and computer programs are the exclusive property of Nexus and are protected against disclosure by any means, and shall not be sold, retained, duplicated, or used in any form or fashion for any purpose whatsoever.

# Appendix G Commercial And Industrial Cost Schedules

## SCHEDULE A.1

### GCM Base Prices

#### GCM Base Rates - 2006

Floor Level	Fin Type	Use Type	Flr Hgt	Wall Type	2 Fire Resistant										Wood Jst (-)	Rein Conc (+)	F P Steel (+)
					1	2	3	4	5	6	7	8	9	10 +1			
Sub	UF	Parking	8'	2	21.40	22.70	24.10	25.40	26.80	28.10	29.45	30.75	32.15	33.45	1.35	5.87	7.48
Bsmt	UF	Utility/Storage	9'	1	17.10	18.55	19.95	21.40	22.70	24.10	25.55	26.95	28.40	29.70	1.40	4.20	5.88
				2	17.35	19.15	20.80	22.50	24.15	25.85	27.60	29.30	30.95	32.65	1.70	4.20	5.88
		Stand Alone	9'	1	22.70	24.20	25.75	27.30	28.70	30.25	31.80	33.35	34.85	36.30	1.51	4.49	6.29
		Basement		2	23.05	24.85	26.60	28.50	30.30	32.20	33.95	35.75	37.65	39.45	1.83	4.49	6.29
		Parking Garage	8'	2	22.40	23.80	25.20	26.50	27.90	29.30	30.65	32.05	33.45	34.85	1.39	6.04	6.14
FO		General Retail	12'	1	36.80	39.20	41.50	43.80	46.25	48.55	50.95	53.30	55.60	58.00	2.35	4.52	7.44
				2	37.20	39.95	42.70	45.60	48.35	51.10	53.85	56.60	59.35	62.10	2.76	4.52	7.44
		Dinning/Lounge	10'	1	60.90	63.05	65.20	67.45	69.60	71.85	74.00	76.15	78.45	80.60	2.19	4.88	7.60
				2	61.30	63.80	66.35	69.00	71.55	74.05	76.60	79.25	81.75	84.30	2.57	4.88	7.60
FD		Office	10'	1	63.60	65.15	66.85	68.40	70.00	71.65	73.25	74.80	76.50	78.05	1.62	6.93	8.05
				2	63.85	65.90	67.85	69.80	71.70	73.65	75.60	77.55	79.50	81.45	1.95	6.93	8.05
		Apartment	10'	1	39.80	41.80	43.70	45.70	47.60	49.55	51.55	53.45	55.45	57.45	1.95	4.84	7.53
				2	40.20	42.45	44.70	47.00	49.35	51.60	53.85	56.15	58.50	60.75	2.30	4.84	7.53
First	UF	Utility/Storage	14'	1	19.50	22.60	25.70	28.75	31.85	34.95	38.00	41.10	44.15	47.25	3.08	1.80	9.83
				2	20.25	24.10	27.90	31.75	35.55	39.30	43.20	47.00	50.75	54.55	3.81	1.80	9.83
		Parking Garage *	10'	1	22.65	24.30	25.90	27.45	29.10	30.70	32.25	33.90	35.45	37.05	1.59	3.58	9.62
				2	23.30	25.45	27.65	29.75	31.95	34.10	36.30	38.40	40.65	42.75	2.16	3.58	9.62
				4	21.50	21.90	22.20	22.55	22.95	23.35	23.75	24.05	24.45	24.85	0.37	3.58	9.62
SF		Car Wash Auto	12'	1	27.45	30.50	33.50	36.55	39.65	42.60	45.70	48.65	51.75	54.80	3.03	1.92	9.87
				2	27.85	31.20	34.60	38.05	41.45	44.80	48.30	51.65	55.00	58.50	3.40	1.92	9.87
		Ice Rink	18'	1	42.10	45.30	48.60	51.85	55.05	58.25	61.45	64.65	67.95	71.15	3.21	4.63	11.69
				2	43.25	47.50	51.80	56.05	60.40	64.60	68.95	73.20	77.55	81.75	4.29	4.63	11.69
		Auto Service	14'	1	31.45	35.00	38.65	42.20	45.80	49.35	53.00	56.55	60.20	63.75	3.59	1.97	10.72
				2	31.90	35.90	39.90	43.95	47.95	52.05	56.05	60.15	64.15	68.15	4.03	1.97	10.72
FO		Auto Showroom	14'	1	45.95	51.10	56.15	61.30	66.45	71.50	76.65	81.80	86.95	92.00	5.12	1.97	10.72
				2	46.30	51.70	57.05	62.55	67.95	73.30	78.70	84.20	89.60	94.95	5.42	1.97	10.72
		Bowling Alley	14'	1	48.10	51.00	53.75	56.65	59.55	62.35	65.20	68.10	70.90	73.75	2.86	4.27	10.39
				2	48.90	52.65	56.35	59.95	63.65	67.35	71.10	74.70	78.40	82.10	3.69	4.27	10.39
		Theater **	20'	1	68.60	74.55	80.45	86.30	92.25	98.10	103.95	109.80	115.75	121.60	5.89	2.57	13.71
				2	70.80	78.85	86.80	94.80	102.85	110.90	118.85	126.90	134.90	142.85	8.01	2.57	13.71
		Health Club ***	12'	1	66.85	69.65	72.40	75.15	77.80	80.55	83.35	86.10	88.75	91.50	2.73	4.26	10.87
				2	67.65	71.15	74.70	78.15	81.65	85.10	88.60	92.05	95.60	99.10	3.49	4.26	10.87
		General Retail	14'	1	39.35	43.15	46.90	50.65	54.45	58.20	61.95	65.70	69.50	73.25	3.76	2.17	9.90
				2	40.20	44.65	49.15	53.70	58.20	62.65	67.25	71.70	76.30	80.75	4.51	2.17	9.90
		Discount	14'	1	40.20	43.80	47.55	51.30	55.05	58.80	62.55	66.30	70.05	73.80	3.75	2.17	9.90
				2	40.90	45.35	49.90	54.35	58.80	63.35	67.85	72.30	76.85	81.30	4.49	2.17	9.90
		Regional Shopping Center	14'	1	45.95	49.75	53.55	57.35	61.15	64.95	68.65	72.45	76.25	80.05	3.79	2.24	10.19
				2	46.60	51.10	55.55	60.00	64.55	69.00	73.55	78.00	82.40	86.95	4.47	2.24	10.19
		Neighborhood Shopping Center	14'	1	40.65	44.60	48.65	52.60	56.60	60.65	64.60	68.55	72.60	76.55	3.98	2.24	10.19
				2	41.35	46.05	50.80	55.55	60.25	65.00	69.60	74.35	79.05	83.80	4.71	2.24	10.19
		Department Store	16'	1	64.20	67.90	71.65	75.30	79.00	82.75	86.35	90.10	93.85	97.55	3.70	4.34	10.71
				2	65.10	69.60	74.25	78.90	83.40	88.05	92.55	97.20	101.85	106.35	4.59	4.34	10.71
		Supermarket	14'	1	47.60	51.35	55.10	58.85	62.55	66.30	70.05	73.80	77.55	81.30	3.75	2.17	9.90
				2	48.40	52.85	57.30	61.85	66.30	70.90	75.35	79.80	84.35	88.80	4.49	2.17	9.90
		Convenience Market	12'	1	46.50	49.80	53.05	56.35	59.50	62.75	66.05	69.30	72.60	75.75	3.25	2.24	9.77
				2	47.25	51.20	55.10	59.05	63.05	67.00	70.90	74.85	78.85	82.80	3.94	2.24	9.77
		Dining/Lounge	12'	1	65.60	69.10	72.55	76.05	79.45	83.00	86.50	89.95	93.45	96.85	3.47	2.35	10.25
				2	66.35	70.65	74.85	79.05	83.35	87.60	91.90	96.10	100.40	104.60	4.24	2.35	10.25
FD		Hotel - Motel	12'	1	65.90	69.30	72.70	76.10	79.50	82.90	86.30	89.70	93.20	96.65	3.43	2.17	10.45
		Service		2	66.60	70.80	75.00	79.10	83.35	87.55	91.75	95.85	100.10	104.30	4.18	2.17	10.45
		Bank	14'	1	89.00	93.50	98.00	102.50	107.05	111.55	116.05	120.55	125.15	129.65	4.52	2.39	12.13
				2	89.85	95.20	100.55	105.90	111.35	116.65	122.00	127.35	132.70	138.15	5.37	2.39	12.13
		General Office	12'	1	68.30	71.15	73.90	76.75	79.60	82.45	85.30	88.15	91.00	93.85	2.84	4.28	10.98
				2	69.00	72.65	76.20	79.85	83.40	87.05	90.65	94.30	97.85	101.50	3.60	4.28	10.98
		Medical Office	12'	1	73.25	76.70	80.30	83.75	87.25	90.85	94.30	97.80	101.35	104.85	3.51	2.28	11.09
				2	74.05	78.35	82.65	86.80	91.10	95.40	99.70	104.00	108.25	112.55	4.28	2.28	11.09

# Appendix G Commercial And Industrial Cost Schedules

## SCHEDULE A.1 GCM Base Prices

Floor Level	Fin Type	Use Type	Flr Hgt	Wall Type	2 Fire Resistant										Wood Jst (-)	Rein Conc (+)	F P Steel (+)
					1	2	3	4	5	6	7	8	9	10 +1			
First	FD	Country Club	12'	1	72.00	75.40	78.90	82.30	85.80	89.20	92.70	96.05	99.55	102.95	3.43	2.28	10.97
				2	72.80	77.00	81.30	85.50	89.80	94.00	98.30	102.55	106.85	111.05	4.24	2.28	10.97
		Funeral Home	12'	1	63.55	67.00	70.35	73.70	77.20	80.55	83.90	87.35	90.70	94.05	3.39	2.28	10.97
				2	64.35	68.60	72.80	76.95	81.20	85.40	89.55	93.70	97.95	102.15	4.19	2.28	10.97
		Nursing Home	10'	1	62.50	65.35	68.20	71.05	73.90	76.75	79.60	82.45	85.30	88.20	2.86	2.28	10.53
				2	63.10	66.65	70.10	73.65	77.25	80.80	84.25	87.80	91.40	94.85	3.53	2.28	10.53
		Hotel - Motel Unit	10'	1	60.80	63.45	66.15	68.85	71.50	74.20	76.90	79.60	82.25	84.95	2.69	2.11	9.75
				2	61.40	64.70	67.95	71.25	74.65	77.95	81.25	84.50	87.80	91.10	3.30	2.11	9.75
		Apartment	10'	1	41.85	44.50	47.20	49.75	52.40	55.10	57.75	60.40	63.05	65.75	2.65	2.10	9.65
				2	42.45	45.70	49.00	52.25	55.50	58.80	62.05	65.30	68.60	71.85	3.28	2.10	9.65
Wall Hgt	UF	+/-	1'	1	0.45	0.60	0.75	0.95	1.10	1.25	1.50	1.65	1.75	2.00	0.17	0.04	0.26
				2	0.45	0.65	0.95	1.10	1.40	1.60	1.80	2.10	2.25	2.55	0.23	0.04	0.26
	SF	+/-	1'	1	0.60	0.75	1.05	1.20	1.50	1.65	1.80	2.10	2.25	2.55	0.21	0.02	0.28
				2	0.60	0.90	1.10	1.40	1.60	1.80	2.10	2.30	2.60	2.80	0.25	0.02	0.28
	FO	+/-	1'	1	0.90	1.05	1.20	1.50	1.65	1.80	2.05	2.20	2.50	2.65	0.20	0.01	0.22
				2	0.95	1.15	1.45	1.70	2.00	2.20	2.50	2.70	3.05	3.25	0.26	0.01	0.22
	FD	+/-	1'	1	1.25	1.50	1.70	1.95	2.15	2.30	2.55	2.75	2.90	3.20	0.21	0.01	0.20
				2	1.40	1.60	1.80	2.15	2.35	2.65	2.85	3.15	3.40	3.70	0.26	0.01	0.20
Upper	UF	Utility	12'	1	16.15	18.65	21.20	23.85	26.40	28.95	31.60	34.15	36.65	39.30	2.57	4.13	7.13
				2	16.80	19.95	23.15	26.35	29.55	32.75	35.95	39.25	42.40	45.60	3.20	4.13	7.13
		Parking Garage	10'	1	21.20	22.85	24.40	26.00	27.65	29.20	30.75	32.45	34.00	35.55	1.59	6.19	6.65
				2	21.85	23.95	26.15	28.30	30.50	32.60	34.85	36.95	39.15	41.25	2.16	6.19	6.65
				4	20.00	20.40	20.70	21.10	21.50	21.90	22.20	22.60	23.00	23.35	0.37	6.19	6.65
	FO	Health Club ***	12'	1	61.55	64.20	66.80	69.45	72.00	74.70	77.25	79.80	82.45	85.05	2.60	7.23	8.50
				2	62.35	65.80	69.20	72.55	76.00	79.35	82.85	86.20	89.55	93.00	3.39	7.23	8.50
		General Retail	12'	1	33.60	36.60	39.50	42.50	45.40	48.40	51.30	54.25	57.15	60.15	2.93	4.51	7.38
				2	34.40	38.10	41.65	45.35	49.00	52.65	56.35	59.90	63.60	67.25	3.65	4.51	7.38
		Mall Shops	14'	1	41.55	45.15	48.90	52.60	56.20	59.95	63.65	67.40	71.00	74.75	3.69	4.64	8.00
				2	42.20	46.55	50.90	55.35	59.75	64.10	68.45	72.80	77.20	81.55	4.37	4.64	8.00
		Department Store	14'	1	56.65	59.55	62.55	65.50	68.40	71.35	74.25	77.15	80.10	83.00	2.93	6.66	8.08
				2	57.50	61.30	65.10	68.90	72.70	76.50	80.30	84.10	87.80	91.60	3.79	6.66	8.08
		Dinning/Lounge	12'	1	61.00	64.35	67.80	71.10	74.45	77.80	81.25	84.60	87.95	91.40	3.38	4.87	7.97
				2	61.75	65.90	70.00	74.15	78.35	82.50	86.60	90.75	94.90	99.10	4.15	4.87	7.97
	FD	Hotel - Motel Service	12'	1	61.40	64.70	68.00	71.35	74.65	77.95	81.25	84.45	87.80	91.10	3.30	5.03	8.18
				2	62.20	66.25	70.35	74.35	78.50	82.50	86.60	90.60	94.75	98.75	4.07	5.03	8.18
		General Office	12'	1	63.10	65.75	68.55	71.30	74.05	76.70	79.45	82.20	84.85	87.60	2.72	7.04	8.47
				2	63.85	67.45	70.95	74.55	78.00	81.50	85.10	88.60	92.05	95.65	3.53	7.04	8.47
		Medical Office	11'	1	66.85	69.85	72.85	75.95	78.95	81.95	85.05	88.10	91.10	94.20	3.05	5.06	8.30
				2	67.50	71.30	75.10	78.90	82.70	86.50	90.20	94.00	97.80	101.60	3.79	5.06	8.30
		Nursing Home	10'	1	57.80	60.55	63.35	66.00	68.75	71.50	74.30	76.95	79.70	82.45	2.73	5.28	8.13
				2	58.50	61.90	65.35	68.70	72.10	75.55	78.90	82.30	85.75	89.15	3.41	5.28	8.13
		Hotel - Motel Unit	10'	1	56.50	59.10	61.60	64.20	66.80	69.35	71.85	74.45	77.05	79.65	2.57	4.89	7.53
				2	57.10	60.30	63.50	66.70	69.90	73.10	76.30	79.50	82.60	85.80	3.19	4.89	7.53
		Apartment	10'	1	37.35	39.95	42.50	45.10	47.55	50.15	52.70	55.30	57.75	60.35	2.54	4.84	8.08
				2	37.75	40.75	43.60	46.45	49.40	52.25	55.15	58.10	60.95	63.90	2.90	4.84	8.08

\* Add To Base Price (1st Floor) To Account For Roof Deck Parking

\*\* Adjust Base Price To Account For Balconies, Per Square Foot Of Balcony Area

\*\*\* Add Per Court - Racquetball

- Squash

Add To Base Price (1st Floor) To Account For Elevated Floor Construction

43300

34600

4.43			
28.38	1.88	2.64	5.27
5.98	4.72	0.59	1.83

# Appendix G Commercial And Industrial Cost Schedules

## SCHEDULE A.2

### GCI Base Prices

#### GCI Base Rates - 2006

Floor Level	Fin Type	Use Type	Fir Hgt	Wall Type	Fire Resistant										Wood Jst (-)	Rein Conc (+)	F P Steel (+)
					1	2	3	4	5	6	7	8	9	10 +1			
Bsm	UF	Light Utility/Storage	9'	1	21.05	22.00	23.05	24.00	24.95	26.05	27.00	27.95	28.90	29.95	0.99	5.60	5.88
				2	21.25	22.55	23.85	25.05	26.35	27.65	28.85	30.15	31.35	32.65	1.26	5.60	5.88
		Heavy Utility/Storage	9'	1	26.85	27.90	28.95	30.00	31.10	32.15	33.20	34.15	35.20	36.25	1.06	7.17	6.07
				2	27.00	28.35	29.65	30.95	32.35	33.65	35.05	36.35	37.75	39.05	1.35	7.14	6.04
SF		Light Manufacturing	9'	1	29.50	30.60	31.70	32.85	33.95	35.05	36.15	37.25	38.40	39.50	1.12	5.99	6.29
				2	29.75	31.20	32.65	34.00	35.45	36.75	38.20	39.65	41.00	42.45	1.41	5.99	6.29
		Heavy Manufacturing	9'	1	33.80	34.90	36.05	37.15	38.25	39.35	40.45	41.60	42.70	43.80	1.12	7.17	6.07
				2	34.05	35.50	36.95	38.30	39.75	41.10	42.55	43.95	45.30	46.75	1.41	7.17	6.07
FO		Truck Terminal Bunk Room	9'	1	33.05	34.50	35.95	37.30	38.75	40.20	41.55	43.00	44.35	45.80	1.41	5.99	6.29
				2	33.40	35.10	36.75	38.45	40.25	41.95	43.60	45.30	47.00	48.80	1.71	5.99	6.29
First	UF	Light Utility/Storage	14'	1	24.00	26.20	28.40	30.50	32.70	34.85	37.05	39.25	41.35	43.55	2.18	3.57	9.83
				2	24.35	27.00	29.50	32.05	34.70	37.25	39.80	42.45	45.00	47.55	2.58	3.57	9.83
		Heavy Utility/Storage	14'	1	20.20	21.45	22.65	23.95	25.15	26.45	27.75	28.95	30.25	31.55	1.26	2.16	12.70
				2	30.90	33.50	36.05	38.65	41.15	43.70	46.30	48.90	51.35	53.95	2.55	4.75	10.25
		Light Warehouse	18'	1	31.35	34.40	37.30	40.35	43.30	46.30	49.35	52.30	55.30	58.25	2.98	4.75	10.25
				2	26.00	27.60	29.20	30.75	32.35	33.95	35.50	37.10	38.65	40.25	1.57	4.10	14.15
		Mini Warehouse	12'	1	28.90	31.80	34.80	37.75	40.75	43.65	46.65	49.60	52.60	55.50	2.96	4.11	11.59
				2	29.45	32.90	36.45	39.95	43.50	46.95	50.50	53.95	57.55	61.00	3.51	4.11	11.59
		Commercial Garage	14'	1	24.35	26.00	27.65	29.30	31.05	32.70	34.35	36.00	37.65	39.30	1.66	2.55	14.76
				2	18.20	19.90	21.60	23.30	25.15	26.85	28.55	30.25	31.95	33.75	1.73	2.85	9.73
		Hanger	20'	1	18.30	20.25	22.05	23.90	25.80	27.65	29.60	31.40	33.35	35.15	1.88	2.85	9.73
				2	14.15	15.15	16.15	17.20	18.20	19.20	20.25	21.15	22.20	23.20	1.01	2.53	13.62
		Truck Terminal Warehouse	14'	1	31.10	33.50	36.05	38.45	40.95	43.45	45.85	48.40	50.80	53.30	2.47	3.82	10.51
				2	31.80	35.05	38.25	41.50	44.70	47.90	51.15	54.35	57.60	60.80	3.22	3.82	10.51
		Loft Warehouse	14'	1	27.00	28.50	30.00	31.45	32.95	34.45	35.95	37.35	38.85	40.40	1.49	2.31	13.58
				2	34.90	38.35	41.90	45.35	48.90	52.35	55.90	59.35	62.90	66.35	3.50	4.27	12.13
		Light Manufacturing	14'	1	35.35	39.25	43.15	47.05	51.05	54.95	58.85	62.85	66.75	70.60	3.93	4.27	12.13
				2	30.65	33.05	35.60	38.10	40.50	43.00	45.45	47.95	50.45	52.85	2.47	2.66	15.34
		Heavy Manufacturing	14'	1	31.80	35.35	38.80	42.20	45.75	49.20	52.70	56.15	59.70	63.10	3.48	3.82	10.51
				2	32.25	36.15	40.05	44.00	47.90	51.80	55.65	59.65	63.50	67.40	3.91	3.82	10.51
		Loft Manufacturing	12'	1	27.80	30.25	32.80	35.20	37.75	40.25	42.70	45.20	47.75	50.20	2.49	2.31	13.58
				2	22.65	25.75	28.70	31.75	34.85	37.80	40.85	43.80	46.90	49.95	3.03	3.82	10.51
		Mill Manufacturing	40'	1	23.10	26.55	30.05	33.45	37.00	40.40	43.80	47.35	50.75	54.30	3.46	3.82	10.51
				2	37.20	39.80	42.40	44.90	47.50	50.10	52.70	55.30	57.80	60.40	2.58	3.82	10.51
		Small Shop	14'	1	37.65	40.60	43.65	46.70	49.65	52.70	55.65	58.70	61.75	64.70	3.01	3.82	10.51
				2	33.20	34.80	36.30	37.90	39.50	41.10	42.70	44.30	45.85	47.45	1.60	2.31	13.58
		Power Generating Plant	30'	1	42.15	44.75	47.35	49.95	52.45	55.05	57.65	60.25	62.85	65.35	2.58	4.75	10.25
				2	42.60	45.65	48.60	51.65	54.60	57.65	60.70	63.65	66.70	69.65	3.01	4.75	10.25
		Truck Terminal Bunk Room	9'	1	37.25	38.85	40.45	42.05	43.65	45.25	46.85	48.45	50.05	51.65	1.60	2.81	14.15
				2	27.15	29.75	32.40	34.95	37.50	40.20	42.75	45.40	47.95	50.65	2.60	3.77	10.26
		Industrial Office	12'	1	27.45	30.55	33.50	36.45	39.55	42.50	45.45	48.45	51.40	54.45	3.00	3.77	10.26
				2	83.85	90.55	97.30	104.00	110.75	117.45	124.30	131.00	137.60	144.45	6.72	9.73	17.42
		Research/Devel	12'	1	85.10	93.05	101.05	109.10	117.00	125.05	133.05	140.95	149.00	157.00	7.99	9.73	17.42
				2	76.20	81.35	86.50	91.55	96.70	101.85	106.90	112.05	117.20	122.25	5.12	9.80	23.41
		Dock Floor	+1'	1	29.00	31.95	35.00	38.05	41.00	44.05	47.00	50.05	53.00	56.05	3.01	3.82	10.51
				2	29.70	33.50	37.30	41.10	44.90	48.80	52.45	56.35	60.15	63.95	3.79	3.82	10.51
				1	24.90	26.95	29.00	31.05	33.00	35.05	37.10	39.15	41.10	43.15	2.03	2.31	13.58
				2	94.80	100.60	106.50	112.30	118.10	124.05	129.85	135.75	141.55	147.35	5.85	10.25	12.80
				1	97.15	105.35	113.50	121.70	129.85	138.15	146.35	154.50	162.70	170.85	8.19	10.25	12.80
				2	33.50	35.35	37.10	38.85	40.60	42.40	44.15	45.90	47.75	49.50	1.77	3.43	9.16
				1	33.85	35.90	37.85	39.95	42.00	44.05	46.15	48.10	50.15	52.25	2.05	3.43	9.16
				2	29.75	30.75	31.75	32.75	33.60	34.60	35.60	36.60	37.60	38.60	0.97	2.00	12.12
				1	63.35	65.75	68.15	70.55	72.95	75.35	77.75	80.25	82.70	85.10	2.40	3.77	10.26
				2	64.10	67.15	70.30	73.35	76.50	79.55	82.70	85.75	88.90	91.95	3.10	3.77	10.26
				1	59.20	60.45	61.80	63.15	64.45	65.70	67.05	68.40	69.60	70.95	1.31	2.25	13.39
				2	76.00	78.50	81.00	83.50	86.10	88.60	91.10	93.60	96.10	98.70	2.52	3.95	10.77
				1	76.75	80.00	83.25	86.50	89.75	93.00	96.25	99.50	102.65	105.90	3.25	3.95	10.77
				2	71.55	72.90	74.35	75.65	77.00	78.45	79.80	81.20	82.55	83.90	1.38	2.36	14.04

# Appendix G Commercial And Industrial Cost Schedules

## SCHEDULE A.2 GCI Base Prices

### GCI Base Rates - 2006

2															1		3		4	
Fire Resistant															Wood	Rein	F P			
Floor Level	Fin Type	Use Type	Flr Hgt	Wall Type	1	2	3	4	5	6	7	8	9	10 +1	(-)	Jst	Conc (+)	Steel (+)		
Upper	UF	Light Utility/Storage	12'	1	0.55	0.70	0.95	1.05	1.20	1.45	1.60	1.75	1.95	2.10	0.17	0.07	0.25	0.28		
				2	0.55	0.70	0.95	1.15	1.40	1.55	1.70	1.95	2.15	2.30	0.20	0.07	0.25	0.28		
				3	0.50	0.60	0.65	0.75	0.90	1.00	1.10	1.15	1.25	1.40	0.10	0.09	0.27	0.31		
	SF	+/-	1'	1	0.60	0.75	1.00	1.10	1.25	1.50	1.65	1.80	2.00	2.15	0.17	0.09	0.26	0.29		
				2	0.65	0.90	1.10	1.25	1.55	1.70	1.95	2.15	2.30	2.60	0.21	0.09	0.26	0.29		
				3	0.60	0.70	0.75	0.95	1.00	1.10	1.20	1.25	1.45	1.50	0.10	0.07	0.29	0.32		
	FO	+/-	1'	1	0.60	0.75	0.95	1.10	1.20	1.45	1.60	1.70	1.95	2.05	0.16	0.07	0.26	0.28		
				2	0.65	0.90	1.05	1.20	1.45	1.60	1.75	2.00	2.15	2.30	0.18	0.07	0.26	0.28		
				3	0.55	0.60	0.65	0.75	0.90	0.95	1.00	1.05	1.15	1.20	0.07	0.06	0.28	0.29		
	FD	+/-	1'	1	1.65	1.75	2.00	2.10	2.25	2.35	2.55	2.70	2.80	3.05	0.15	0.07	0.26	0.28		
				2	1.70	1.95	2.15	2.30	2.60	2.75	2.90	3.20	3.35	3.65	0.21	0.07	0.26	0.28		
				3	1.60	1.70	1.80	2.00	2.10	2.20	2.30	2.50	2.60	2.70	0.12	0.06	0.28	0.29		
	Upper	UF	Heavy Utility/Storage	12'	1	19.70	21.55	23.25	25.00	26.70	28.55	30.30	32.00	33.85	35.55	1.76	5.82	6.57	8.09	
					2	20.10	22.25	24.25	26.40	28.50	30.55	32.65	34.80	36.95	38.95	2.10	5.82	6.57	8.09	
		SF	Loft Warehouse	12'	1	25.45	27.35	29.20	31.10	32.95	34.90	36.70	38.65	40.45	42.40	1.88	7.48	6.84	9.15	
					2	25.85	28.05	30.30	32.50	34.85	37.10	39.30	41.55	43.75	46.10	2.25	7.48	6.84	9.15	
				12'	1	19.05	21.55	23.90	26.40	28.90	31.25	33.75	36.10	38.60	41.00	2.43	6.23	8.56	10.20	
					2	19.45	22.25	25.10	27.90	30.70	33.45	36.25	39.15	41.90	44.70	2.80	6.23	8.56	10.20	
		Light Manufacturing	12'	1	28.55	30.55	32.45	34.45	36.45	38.35	40.35	42.35	44.25	46.25	1.96	6.23	7.02	8.66		
				2	28.95	31.25	33.55	35.95	38.25	40.55	42.95	45.25	47.55	49.95	2.33	6.23	7.02	8.66		
		Heavy Manufacturing	12'	1	32.90	34.90	36.80	38.80	40.80	42.70	44.70	46.70	48.60	50.60	1.96	7.48	6.84	9.15		
				2	33.30	35.60	37.90	40.30	42.60	44.90	47.30	49.60	51.85	54.25	2.33	7.48	6.84	9.15		
		Loft Manufacturing	12'	1	24.25	26.75	29.20	31.70	34.30	36.75	39.25	41.70	44.20	46.80	2.50	6.41	7.23	8.91		
				2	24.55	27.45	30.35	33.20	36.20	38.95	41.95	44.85	47.70	50.60	2.88	6.41	7.23	8.91		
		Small Shop	12'	1	23.80	25.80	27.80	29.70	31.70	33.60	35.60	37.60	39.50	41.50	1.96	6.23	7.02	8.66		
				2	24.45	27.10	29.75	32.40	35.05	37.70	40.35	43.00	45.60	48.15	2.63	6.23	7.02	8.66		
			Power Generating Plant	0	38.75	38.75	38.75	38.75	38.75	38.75	38.75	38.75	38.75	38.75	38.75	-	4.97	0.60	2.77	
FO	Truck Terminal Bunk Room	9'	1	28.90	30.65	32.40	34.15	36.00	37.75	39.45	41.30	43.05	44.80	1.77	5.99	6.21	7.77			
			2	29.15	31.20	33.30	35.35	37.30	39.35	41.45	43.50	45.45	47.55	2.05	5.99	6.21	7.77			
FD	Industrial Office	12'	1	59.90	62.30	64.70	67.10	69.50	71.95	74.35	76.75	79.15	81.55	2.40	6.41	7.23	8.91			
			2	60.65	63.70	66.85	69.90	72.95	76.10	79.15	82.30	85.35	88.50	3.10	6.41	7.23	8.91			
	Research/Devel	12'	1	72.25	74.70	77.00	79.45	81.85	84.25	86.70	89.10	91.55	93.95	2.41	6.72	7.58	9.35			
			2	72.90	76.10	79.25	82.30	85.50	88.65	91.80	94.90	98.05	101.20	3.14	6.72	7.58	9.35			

Upper Floor Price Exclusive Of Walls.

## SCHEDULE A.3 GCR Base Prices

### GCR Base Prices - 2006

Floor Level	Fin Type	Use Type	Flr Hgt	Wall Type	1										2		
					1	2	3	4	5	6	7	8	9	10	+1	Fire Res (+)	
Bsmr	UF	Utility/Storage	9'	1	11.85	13.05	14.15	15.35	16.45	17.60	18.70	19.90	21.00	22.20	1.14	4.18	
				2	12.20	13.65	15.00	16.45	17.90	19.35	20.80	22.25	23.60	25.05	1.44	4.18	
	FO	Dinning/Lounge	9'	1	53.70	55.40	57.20	58.90	60.60	62.30	64.00	65.80	67.50	69.20	1.72	4.85	
				2	54.05	56.15	58.20	60.30	62.35	64.55	66.60	68.70	70.75	72.85	2.10	4.85	
		Motel Service	9'	1	50.85	52.30	53.75	55.35	56.80	58.25	59.70	61.15	62.65	64.10	1.47	4.49	
				2	51.20	52.85	54.65	56.45	58.25	59.90	61.70	63.50	65.20	66.95	1.76	4.49	
	FD	General Office	9'	1	49.50	51.20	52.75	54.45	56.05	57.75	59.35	60.90	62.60	64.20	1.63	5.11	
				2	49.85	51.80	53.75	55.70	57.75	59.70	61.65	63.65	65.60	67.55	1.96	5.11	
		Apartment	9'	1	32.65	34.05	35.50	36.95	38.30	39.75	41.15	42.60	44.05	45.40	1.42	4.36	
				2	32.90	34.60	36.30	38.05	39.75	41.45	43.15	44.80	46.50	48.30	1.71	4.36	
	First	FO	Motel Service	12'	1	57.60	60.00	62.40	64.75	67.15	69.55	71.95	74.35	76.75	79.10	2.39	—
					2	58.45	61.70	64.95	68.10	71.35	74.55	77.70	80.95	84.20	87.45	3.21	—
		Dinning/Lounge	12'	1	61.05	63.50	65.95	68.40	70.85	73.30	75.75	78.20	80.65	83.10	2.45	—	
				2	61.85	65.15	68.45	71.85	75.15	78.45	81.75	85.05	88.35	91.65	3.32	—	
FD		Bank	10'	1	78.15	80.85	83.40	86.10	88.70	91.40	94.00	96.55	99.25	101.95	2.64	—	
				2	78.85	82.15	85.45	88.75	92.05	95.45	98.70	102.00	105.30	108.60	3.32	—	
		General Office	10'	1	55.95	58.10	60.40	62.70	65.00	67.20	69.45	71.75	74.05	76.25	2.26	—	
				2	56.60	59.55	62.60	65.55	68.50	71.40	74.35	77.40	80.35	83.30	2.97	—	
		Medical Office	10'	1	66.55	68.85	71.15	73.35	75.65	77.95	80.30	82.50	84.80	87.10	2.29	—	
				2	67.20	70.30	73.25	76.20	79.30	82.25	85.20	88.20	91.15	94.20	3.00	—	

**SCHEDULE A.3**  
**GCR Base Prices**

**GCR Base Prices - 2006**

Floor Level	Fin Type	Use Type	Flr Hgt	Wall Type	1 Wood Joist										2 Fire Res (+)	
					1	2	3	4	5	6	7	8	9	10	+1	
First	FD	Motel Units	9'	1	45.90	47.80	49.55	51.35	53.20	55.00	56.90	58.65	60.45	62.35	1.82	-
				2	46.50	48.95	51.35	53.80	56.20	58.70	61.05	63.55	65.90	68.40	2.43	-
		Funeral Home	12'	1	58.50	61.05	63.55	66.15	68.65	71.15	73.65	76.15	78.65	81.30	2.53	-
				2	59.35	62.75	66.20	69.55	72.90	76.35	79.70	83.10	86.55	89.90	3.39	-
		Nursing Home	10'	1	65.95	68.05	70.25	72.35	74.45	76.55	78.65	80.85	82.95	85.05	2.12	-
				2	66.70	69.55	72.40	75.25	78.10	80.95	83.80	86.65	89.50	92.35	2.85	-
		Apartment	9'	1	36.00	37.75	39.65	41.45	43.20	45.10	46.90	48.65	50.55	52.35	1.82	-
				2	36.60	38.95	41.45	43.80	46.30	48.65	51.15	53.65	56.00	58.50	2.43	-
	Upper FO	Motel Service	12'	1	50.15	52.35	54.65	56.95	59.25	61.45	63.80	66.10	68.40	70.70	2.29	-
				2	50.85	54.05	57.10	60.25	63.30	66.45	69.50	72.65	75.70	78.85	3.10	-
		Dinning/Lounge	12'	1	53.95	56.20	58.60	61.00	63.40	65.75	68.05	70.45	72.85	75.25	2.37	-
				2	54.65	57.90	61.10	64.35	67.55	70.80	74.00	77.25	80.45	83.70	3.21	-
	FD	Motel Units	9'	1	39.35	41.05	42.75	44.55	46.25	47.95	49.65	51.35	53.15	54.85	1.72	-
				2	39.95	42.20	44.60	46.90	49.15	51.55	53.85	56.15	58.50	60.80	2.32	-
		Apartment	9'	1	29.45	31.15	32.85	34.55	36.25	38.05	39.75	41.45	43.15	44.85	1.72	-
				2	30.00	32.30	34.60	37.00	39.25	41.55	43.95	46.25	48.50	50.80	2.32	-
		Nursing Home	10'	1	58.85	60.95	63.00	65.10	67.20	69.30	71.50	73.55	75.65	77.75	2.11	-
				2	59.50	62.30	65.15	68.00	70.85	73.70	76.50	79.35	82.20	85.05	2.84	-

**SCHEDULE A.4**  
**GCK Base Rates**

**GCK Base Rates - 2006**

Light Pre-engineered Steel And Pole Framed Buildings (Used For C/I Occupancies)  
Per Square Foot, Average Quality, 12' Eaves Height

	Perimeter/Area Ratio										
	1	2	3	4	5	6	7	8	9	10 +1	
Light Metal/Wood Siding, Pole Frame	10.45	10.95	11.45	11.95	12.50	13.00	13.50	14.00	14.55	15.05	0.50
Add Per P/A Ratio:											
Exterior Sheathing	0.10	0.20	0.40	0.50	0.60	0.70	0.90	1.00	1.10	1.20	0.12
Insulation	0.95	1.00	1.05	1.15	1.20	1.25	1.45	1.50	1.55	1.65	0.09
Steel Girts And Purlins	0.60	0.65	0.70	0.75	0.90	0.95	1.00	1.05	1.10	1.15	0.06
Aluminum Siding And Roofing	0.50	0.60	0.65	0.70	0.75	0.95	1.00	1.05	1.10	1.20	0.07
Interior Liner (1)	1.75	2.00	2.20	2.35	2.65	2.80	3.05	3.25	3.40	3.70	0.21
Heavy Gauge Siding And Roofing (2)	1.75	2.00	2.15	2.30	2.55	2.70	2.80	3.05	3.20	3.35	0.17
Plastic Panel Siding	0.45	0.95	1.40	1.75	2.20	2.70	3.15	3.60	4.10	4.45	0.44
Sandwich Paneling	4.80	5.45	6.10	6.85	7.55	8.20	8.95	9.60	10.25	10.95	0.69
Interior Finish (3)											
Unfinished Occupancies (UF)	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	
Semi-Finished Occupancies (SF)	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	8.65	
Finished Open Occupancies (FO)	19.85	20.30	20.80	21.15	21.60	22.05	22.55	23.00	23.35	23.80	0.44
Finished Divided Occupancies (FD)	35.10	35.55	36.05	36.50	36.95	37.30	37.80	38.25	38.70	39.15	0.44
Add Per Square Foot Of Floor Area For Frame Variations:											
Steel Post And Beam	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Rigid Steel Frame Construction	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	
Deduct Per Square Foot Of Floor Area For Absence:											
Concrete Floor	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	

Add Or Deduct 2% (Against The Total Rate) Per Foot Of Wall Height Variation.  
Deduct 2% (Against The Total Rate) For Low Profile (1:12 OR Less Pitch) Roof Construction  
Adjust For Quality Grade From Schedule F.  
Note (1) Liner Is Included With Manufactured Sandwich Paneling  
Note (2) 24 To 20 Gauge Steel; .032" To .050" Thick Aluminum

Note (3) Interior Components:	Walls/LF	Flooring	Ceiling	Ptns&OF	Lighting	Heating	Add A/C	Sprk
Unfinished Occupancies (UF)	—	—	—	1.00	1.95	1.20	2.30	6
Semi-Finished Occupancies (SF)	—	0.70	0.60	1.95	3.90	1.50	2.30	6
Finished Open Occupancies (FO)	44.30	2.85	2.60	5.40	5.60	2.85	2.75	4
Finished Divided Occupancies (FD)	44.30	4.15	3.35	15.15	7.60	4.40	6.30	3

# Appendix G Commercial And Industrial Cost Schedules

## GC Base Price Components And Adjustments Base Rates - 2006

### SCHEDULE B

#### GC Base Price Adjustments For Story Height (BPA)

Story Height																	
B	1-3	4	5-7		8-9	10-11	12-13	14-15	16-18	19-20	21-22	23-24	25-26	27-28	29-30	31-32	33-34
BPA Faci N/A	100		101	102	103	104	105	106	107	108	109	110	111	112	113	114	115

\*( Basements And Sub-Basements Are Not Included In The Count Of The Story Height, But The Percentage Multiplier Is Applicable To The Base Rates).

\*( Basements And Sub-Basements Are Not Included In The Count Of The Story Height, But The Percentage Multiplier Is Applicable To The Base Rates).

### SCHEDULE C

#### GC Base Price Components And Adjustments

		Interior Finish															
ID	Floor Level	Fin Type	Use Type	Ceiling Hgt	Walls Per LF	Floors Per SF	Ceiling Per SF	Ptns	Ltg	Htg Vent A.C.	Htg Only	Add For A.C.	Adjust Lighting	Spk **			
GCM	Sub Bsm	UF	Parking	-	-	-	-	0.40	1.80	0.75	-	-	0.10	0.25	6		
	Bsm	UF	Utility/Storage	-	-	-	-	0.55	1.15	-	1.00	1.95	0.05	0.15	6		
			Stand Alone Basement	-	-	-	-	0.60	1.25	-	1.05	2.10	0.05	0.20	6		
			Parking Garage	-	-	-	-	0.40	2.30	0.75	-	-	0.20	0.30	4		
	FO		General Retail	10'	30.35	2.95	2.65	2.80	5.65	5.30	2.90	-	0.35	0.85	4		
			Dinning/Lounge	8'	30.85	5.65	3.30	15.60	11.05	7.45	2.90	-	0.80	1.65	4		
	FD		Office	8'	29.40	4.50	3.40	13.85	7.70	10.10	4.25	-	0.55	1.15	3		
			Apartment	8'	28.55	3.85	3.05	8.40	4.75	-	3.45	4.35	0.30	0.75	2		
	First	UF	Utility/Storage	-	-	-	-	0.85	1.15	-	1.20	2.30	0.05	0.15	6		
			Parking Garage	-	-	-	-	0.45	2.30	-	-	-	0.20	0.30	4		
	SF		Car Wash Auto	-	5.60	-	-	3.40	5.05	-	1.15	-	0.35	0.75	6		
			Ice Rink	-	6.50	1.80	1.30	7.20	4.65	-	2.10	-	0.35	0.70	4		
			Auto Service Center	-	5.75	1.05	0.70	3.90	5.20	-	1.60	3.50	0.40	0.75	5		
	FO		Auto Showroom	12'	43.60	3.65	2.95	3.40	8.65	7.70	2.90	-	0.65	1.35	4		
			Bowling Alley	12'	40.00	0.90	3.10	2.60	6.15	9.70	3.85	-	0.40	0.90	4		
			Theater	18'	66.70	4.40	3.60	15.85	7.50	12.85	5.10	-	0.50	1.15	1		
			Health Club	10'	23.15	3.00	2.05	21.15	7.90	6.35	4.00	-	0.55	1.20	4		
			General Retail	12'	36.35	2.95	2.65	3.05	5.65	5.60	3.05	-	0.35	0.85	4		
			Discount	12'	34.25	2.65	2.60	5.65	4.25	5.60	3.05	-	0.30	0.60	4		
			Regional Shopping Center	12'	35.25	4.10	2.90	3.55	7.40	7.95	3.15	-	0.50	1.15	4		
			Neighborhood Shopping Ctr	12'	35.25	2.70	2.65	3.15	6.20	5.75	3.15	-	0.45	0.95	4		
			Department Store	14'	41.50	3.75	2.60	10.85	11.55	8.55	3.35	-	0.80	1.70	4		
			Supermarket	12'	34.25	2.10	3.05	9.95	7.45	5.60	3.05	-	0.50	1.10	4		
			Convenience Market	10'	33.05	3.20	2.95	5.75	7.65	7.50	2.95	-	0.50	1.15	4		
			Dinning/Lounge	10'	38.50	5.65	3.30	17.30	11.05	7.90	3.10	-	0.80	1.65	4		
	FD		Hotel/Motels Service	10'	37.05	5.60	3.20	17.95	10.70	8.60	3.80	-	0.75	1.60	2		
			Bank	12'	46.70	4.45	3.65	32.40	14.00	12.05	5.05	-	1.00	2.10	3		
			General Office	10'	36.70	4.25	3.50	15.35	7.70	10.75	4.50	-	0.55	1.15	3		
			Medical Office	10'	37.05	4.30	3.50	24.45	9.65	10.85	4.55	-	0.70	1.45	3		
			Country Club	10'	38.85	6.90	3.40	22.60	9.60	9.00	4.00	-	0.65	1.45	3		
			Funeral Home	10'	34.00	3.85	3.40	20.60	6.25	9.00	4.00	-	0.45	0.95	3		
			Nursing Home	8'	27.20	4.30	3.40	20.30	6.10	8.50	3.80	-	0.40	0.95	3		
			Hotel/Motel Unit	8'	28.80	4.10	3.15	20.70	6.50	7.85	3.50	-	0.45	1.00	3		
			Apartment Units	8'	28.55	3.85	3.05	8.40	4.75	-	3.45	4.35	0.30	0.75	2		
	Upper	UF	Utility/Storage	-	-	-	-	0.75	1.15	-	1.10	2.20	0.05	0.15	6		
			Parking Garage	-	-	-	-	0.45	2.30	0.75	-	-	0.20	0.30	4		
	FO		Health Club	10'	23.15	3.00	2.05	21.15	7.90	6.35	4.00	-	0.55	1.20	4		
			General Retail	10'	30.35	2.95	2.65	2.80	5.65	5.30	2.90	-	0.35	0.85	4		
			Department Store	14'	35.60	3.75	2.60	9.90	11.55	8.10	3.20	-	0.80	1.70	4		
			Mall Shops	12'	35.25	4.10	2.90	3.55	7.40	7.95	3.15	-	0.50	1.15	4		
			Dinning/Lounge	10'	38.50	5.65	3.30	17.30	11.05	7.90	3.10	-	0.80	1.65	4		
	FD		Hotel/Motel Service	10'	37.05	5.60	3.20	17.95	10.70	8.60	3.80	-	0.75	1.60	2		
			General Office	10'	36.70	4.25	3.50	15.35	7.70	10.75	4.50	-	0.55	1.15	3		
			Medical Office	9'	33.35	4.30	3.50	23.25	9.65	10.50	4.35	-	0.70	1.45	3		
			Nursing Home	8'	27.20	4.30	3.40	20.30	6.10	8.50	3.80	-	0.40	0.95	3		
			Hotel/Motel Unit	8'	28.80	4.10	3.15	20.70	6.50	7.85	3.50	-	0.45	1.00	2		
			Apartment Units	8'	28.55	3.85	3.05	8.40	4.75	-	3.45	4.35	0.30	0.75	2		



# SCHEDULE C

## GC Base Price Components And Adjustments

ID	Floor Level	Fin Type	Use Type	Ceiling Hgt	Interior Finish				Htg Vent A.C.	Htg Only	Add For A.C.	Adjust Lighting	Spk **			
					Walls Per LF	Floors Per SF	Ceiling Per SF	Ptns								
1.326	GCI	Bsmt	UF	Light Utility/Storage	--	--	--	--	0.55	1.15	--	0.70	1.65	0.05	0.15	6
			Heavy Utility/Storage	--	--	--	--	0.60	1.25	--	0.75	1.80	0.05	0.20	6	
		SF	Light Manufacturing	--	6.20	0.75	--	1.55	3.95	3.15	2.40	2.90	0.25	0.60	5	
		Heavy Manufacturing	--	6.20	0.75	--	1.55	3.95	3.15	2.40	2.90	0.25	0.60	5		
		FO	Truck Terminal Bunk Room	8'	28.55	1.85	3.00	1.10	4.50	--	2.40	2.90	0.30	0.70	5	
		First	UF	Light Utility/Storage	--	--	--	--	0.85	1.15	--	0.85	1.95	0.05	0.15	6
			Heavy Utility/Storage	--	--	--	--	0.90	1.25	--	0.90	2.10	0.05	0.20	6	
			Light Warehouse	--	--	--	--	1.30	1.90	--	1.40	3.80	0.10	0.30	6	
			Mini Warehouse	--	--	--	--	5.05	1.35	--	--	--	0.10	0.20	5	
			Commercial Garage	--	--	0.75	--	1.10	3.85	2.15	1.30	2.45	0.25	0.55	5	
	Hanger		--	--	0.75	--	1.60	2.10	2.50	1.45	2.90	0.10	0.30	6		
	Truck Terminal Warehouse		--	--	0.85	--	1.10	4.90	--	1.30	3.40	0.35	0.75	5		
	SF		Loft Warehouse	--	9.65	--	--	1.10	3.45	--	0.90	3.40	0.25	0.50	5	
	Light Manufacturing	--	9.20	0.75	--	2.45	3.95	3.70	2.80	3.40	0.25	0.60	5			
	Heavy Manufacturing	--	9.20	0.75	--	2.45	3.95	3.70	2.80	3.40	0.25	0.60	5			
	Loft Manufacturing	--	8.45	--	--	2.40	5.60	2.10	1.20	3.30	0.40	0.80	5			
	Mill Manufacturing	--	28.25	1.65	--	7.15	12.40	6.75	5.20	6.25	0.90	1.85	6			
	Small Shop	--	8.65	0.85	0.30	1.05	2.25	--	1.30	3.40	0.20	0.35	5			
	Power Generating Plant	--	22.21	3.65	0.66	5.97	12.99	--	6.03	6.96	0.93	1.92	5			
	FO	Truck Terminal Bunk Room	8'	28.55	1.85	3.00	1.10	4.50	--	2.40	2.90	0.30	0.70	6		
	FD	Industrial Office	10'	36.70	4.55	2.95	18.15	7.70	7.25	2.70	--	0.55	1.15	3		
	Research/Development	10'	38.50	5.45	4.45	23.20	11.40	7.60	2.85	--	0.80	1.70	3			
	Upper	UF	Light Utility/Storage	--	--	--	--	0.75	1.15	--	0.80	1.85	0.05	0.15	6	
		Heavy Utility/Storage	--	--	--	--	0.75	1.15	--	0.80	1.85	0.05	0.15	6		
		SF	Loft Warehouse	--	8.20	--	--	1.05	3.45	--	0.85	3.20	0.25	0.50	6	
		Light Manufacturing	--	8.20	0.75	--	2.10	3.95	3.50	2.65	3.20	0.25	0.60	5		
		Heavy Manufacturing	--	8.20	0.75	--	2.10	3.90	3.50	2.65	3.20	0.25	0.60	5		
		Loft Manufacturing	--	8.20	--	--	2.35	5.45	2.05	1.15	3.20	0.35	0.80	5		
		Small Shop	--	8.20	0.85	0.30	0.90	2.25	--	1.15	3.20	0.20	0.35	5		
		Power Generating Plant	--	--	3.65	0.65	2.40	13.00	--	3.85	4.45	0.95	1.90	5		
		FO	Truck Terminal Bunk Room	8'	30.80	2.00	3.25	1.20	4.85	--	1.15	3.10	0.35	0.75	5	
		FD	Industrial Office	10'	36.70	4.55	2.95	18.15	7.70	7.25	2.70	--	0.55	1.15	3	
	Research/Development	10'	38.50	5.45	4.45	23.20	11.40	7.60	2.85	--	0.80	1.70	3			
GCR	Bsmt	UF	Utility/Storage	--	--	--	--	0.55	1.15	--	1.00	--	0.05	0.15	6	
		FO	Dinning/Lounge	8'	25.00	5.65	3.45	13.60	11.05	7.20	2.85	--	0.80	1.65	4	
		Motel Service	8'	23.85	3.50	3.10	15.25	10.55	6.65	2.80	--	0.75	1.60	2		
	First	FD	General Office	8'	23.85	4.30	3.55	13.35	7.85	8.10	4.15	--	0.55	1.20	3	
		Apartment Units	8'	29.30	3.00	2.50	8.55	4.30	--	2.70	3.55	0.30	0.60	2		
		FO	Motel Service	10'	29.75	3.50	3.05	17.55	10.55	7.25	3.05	--	0.75	1.60	2	
	Dinning/Lounge	10'	31.25	5.65	3.45	16.00	11.05	7.90	3.10	--	0.80	1.65	4			
	Upper	FD	Bank	10'	25.25	4.55	3.70	27.05	11.05	14.25	8.90	--	1.00	2.10	3	
		General Office	10'	23.85	4.30	3.55	14.10	7.85	8.35	4.30	--	0.55	1.20	3		
		Medical Office	10'	24.10	4.35	3.55	22.45	9.85	8.45	4.35	--	0.70	1.45	3		
		Motel Units	8'	23.15	3.00	2.50	16.90	6.20	2.50	1.10	--	0.45	0.90	2		
		Funeral Home	10'	31.55	3.70	3.40	20.60	6.25	7.25	4.00	--	0.45	0.95	2		
		Nursing Home	8'	25.00	4.05	3.25	28.20	6.95	7.15	3.05	--	0.45	1.05	2		
		Apartment Units	8'	23.15	3.00	2.50	8.55	4.30	--	2.70	3.55	0.30	0.60	2		
		FO	Motel Service	10'	29.75	3.10	2.60	17.55	10.55	7.25	3.05	--	0.75	1.60	2	
	Dinning/Lounge	10'	31.25	5.65	3.45	16.00	11.05	7.90	3.10	--	0.80	1.65	4			
	Upper	FD	Motel Units	8'	23.15	3.00	2.50	16.90	6.20	2.50	1.15	--	0.45	0.90	2	
		Apartment Units	8'	23.15	3.00	2.50	8.55	4.30	--	2.70	3.55	0.30	0.60	2		
		Nursing Home	8'	25.00	4.05	3.25	28.20	6.95	7.15	3.05	--	0.45	1.05	2		

\* Upper floor price exclusive of walls

\*\* Add for unit heat in mini warehouse at \$ .90 per square foot

Group	Total S.F. of Gross Coverage Per Floor									
	5000	10000	15000	20000	30000	40000	50000	75000	1E+05	Over
1	3.32	2.95	2.76	2.64	2.46	2.33	2.27	2.09	2.03	2.03
2	3.32	2.89	2.70	2.58	2.39	2.33	2.15	2.03	1.90	1.90
3	3.19	2.89	2.64	2.52	2.39	2.27	2.15	2.03	1.96	1.84
4	3.01	2.70	2.52	2.39	2.27	2.15	1.96	1.96	1.84	1.84
5	2.89	2.58	2.39	2.33	2.15	2.09	2.03	1.84	1.78	1.78
6	2.21	2.03	1.90	1.84	1.72	1.66	1.60	1.47	1.41	1.41

## Appendix G

### SCHEDULE C (continued)

#### Unit Cost Adjustments

#### Unit Cost Adjustments - 2006

##### Wall Finish

###### Per Square Foot Of Wall Surface

Paint On Masonry	0.70
Plaster On Masonry, Painted	2.15
Drywall, Painted	1.90
Lath & Plaster, Painted	3.20
<b>Hardboard paneling</b>	
Patterned	2.70
Plain	1.55
<b>Plywood Paneling</b>	0.00
Softwood	2.25
Hardwood	4.05
<b>Wood Paneling</b>	
Softwood	3.95
Hardwood	7.20
Tile Or Block Glazing	5.35
Ceramic Or Quarry Tile	12.70
Enameled metal Tile	7.05
Plastic Tile	5.35
Acoustical Tile	1.70
Marble	32.05
Add For Canval Or Cloth	3.60
Add For Custom Grade Wallpaper	3.25
Add For Standard Grade Wallpaper	1.55
Add For Furring, Wood	0.85
Add For Furring, Metal	1.45
Add For Vinyl Wall Covering	2.15
Add For Insulation For Masonry Walls	0.80
Add Insulation For Studded Walls	0.60

##### Floor Finish

###### Per Square Foot

Softwood	4.95
Hardwood	6.20
Maple	7.25
Parquet	8.30
Add For Sleepers	1.10
Parquet And Mastic	6.95
Woodblock, Creosoted	6.15
Steel Plate Tile, Heavy Duty Industrial	10.75
Concrete Topping, Integral, Plain, 1 1/2 to 2"	1.00
Concrete Hardener And Sealer	0.90
Acid Proof Birck, Heavy Duty Industrial	16.80
Asphalt Tile	1.95
Vinyl Tile	5.60
Cork And Rubber Tile	4.55
Vinyl Composition Tile	2.15
Sheet Tile	4.55
Sheet Linoleum	3.80
Ceramic And Quarry Tile	11.60
Terrazzo	10.50
Slate, Grouted	14.10
Marble	35.50
Carpet And Pad	3.25
Carpet, Indoor, Outdoor	1.80
Computer Floor, Elevated	19.15
Gym Floor, Hardwood, Wood Sub Plus Sleepers	10.70
Brick, Common	7.80
Brick, Pavers, In Concrete	9.60
Flagstone, In Concrete	12.65
Epoxy	7.05
Epoxy With Colored Chips	8.85
Grating, Steel Or Aluminum	18.65

##### Ceiling Finish

###### Per Square Foot

Acoustical Tile	
Mineral Fiber	2.60
Organic Fiber	1.90
Acoustical Metal Panel And Pads	7.70
Drywall, Taped And Painted	1.80
Fiberboard Panel	1.40
Luminous Panels	7.50
Paint Only, On Under Floor/Roof Structure	0.80
Plaster On Lath, Painted	2.50
Plaster On Masonry, Painted	2.05
Plywood Paneling, Hardwood	4.60
Wood Tongue And Groove, Softwood	2.95
Add For Furring, Wood	1.05
Add For Furring, Metal	1.65
Add For Ceiling Structure	1.70
Add For Ceiling Insulation	0.70
Add For Ceiling Suspension System	1.60

##### Partitioning

###### Per Square Of Wall Surface

Framed, 2 x 4 Wood Studs	1 - Side	2 - Side
Drywall, Painted	3.45	5.30
Lath And Plaster, Painted	4.75	7.90
Metal Lath And Plaster, Painted	4.85	8.10
<b>Plywood Paneling:</b>		
Softwood	3.80	6.15
Hardwood	5.60	9.65
<b>Wood Paneling:</b>		
Softwood	5.45	9.35
Hardwood	8.70	15.90
Add For Metal Studs	0.10	0.10

Masonry, Per Thickness	4"	6"	8"	12"
<b>Concrete Block</b>				
Hollow Exposed	5.60	6.20	6.95	9.25
Solid	5.85	6.65	—	—
Clay Tile	7.25	8.45	9.25	—
Gypsum Block	5.90	6.50	—	—
<b>Galzed Tile</b>				
1 Face	10.25	10.95	11.65	—
2 Face	15.00	15.65	16.35	—
<b>Glazed Block</b>				
1 Face	11.75	12.40	13.10	15.40
2 Face	17.85	18.55	19.30	—
Add Per Side For Interior Wall Finish From Above				

##### Folding Curtain

Wood And Plastic	15.40
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##### Modular Metal

Single Thickness	13.95
2" Insulated	16.25
Modular Hardboard	9.40
Modular Softwood	12.10
Modular Hardwood	17.55

Add For Glazing	1.45
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Laminated Gypsum 2 1/4"	7.60
Asbestos Cement	13.95
Woven Wire, Including Doors	7.80
Clear Glass, Full Height	35.30

## SCHEDULE C (continued)

### Unit Finish Adjustments

#### Apartments

Add per square foot per floor to account for variations in average unit size. The unit finish adjustment includes the cost of one (1) full bath, one (1) complete kitchen unit and air conditioning (if applicable). Thru-the-wall residential-type air conditioning units are not considered as real property in apartment units.

Average Unit Size	Add Per Sq Ft W/O AC	Add Per Sq Ft W/AC	Average Unit Size	Add Per Sq Ft W/O AC	Add Per Sq Ft W/AC
400	15.55	19.10	1350	4.60	8.10
450	13.80	17.40	1400	4.40	8.00
500	12.45	15.95	1450	4.30	7.80
550	11.30	14.85	1500	4.20	7.70
600	10.40	13.90	1550	4.00	7.55
650	9.60	13.10	1600	3.85	7.45
700	8.90	12.40	1650	3.75	7.30
750	8.30	11.85	1700	3.70	7.20
800	7.80	11.30	1750	3.55	7.05
850	7.30	10.85	1800	3.45	7.00
900	6.95	10.45	1850	3.40	6.90
950	6.55	10.05	1900	3.25	6.80
1000	6.20	9.75	1950	3.20	6.70
1050	5.95	9.45	2000	3.15	6.65
1100	5.65	9.20	2050	3.00	6.55
1150	5.40	8.95	2100	2.95	6.50
1200	5.15	8.70	2150	2.90	6.45
1250	4.95	8.45	2200	2.80	6.30
1300	4.80	8.30	Over	2.75	6.20

#### Motels & Hotels

Add per square foot per floor to account for variations in average unit size. The unit finish adjustment includes the cost of one (1) full bath.

Average Unit Size	Strip	Arrangement Back - Back	Centerhall
150	15.55	17.15	18.75
175	13.30	14.80	16.25
200	11.65	13.00	14.45
225	10.40	11.65	12.95
250	9.35	10.55	11.80
275	8.45	9.65	10.85
300	7.80	8.90	10.00
325	7.20	8.30	9.35
350	6.65	7.75	8.80
375	6.20	7.25	8.25
400	5.85	6.80	7.80
425	5.45	6.45	7.35
450	5.15	6.10	7.05
475	4.90	5.85	6.70
500	4.65	5.55	6.45
525	4.40	5.30	6.15
550	4.25	5.10	5.90
575	4.05	4.85	5.70
600	3.85	4.65	5.45
625	3.75	4.55	5.30
650	3.55	4.35	5.10
675	3.45	4.25	4.95
700	3.30	4.05	4.80
Add Per Kitchen Unit (Cabinets And Sinks)			2900

#### Strip Retail

Add per square foot to account for division walls. The component for partitioning in retail models does not include the division walls that form the common walls with the adjoining units. In the following table "X" equals:

$$X = \frac{\text{Area}}{N-1} \times \frac{1}{\text{Typical Depth}}$$

Example: The "X" value for an eleven(11) unit strip center, 200' x 80' deep, is twenty (20), calculated as follows: 16,000 SF/10 = 1,600, then 1,600/80 = 20.

The corresponding additive from the table is 3.80 per SF.

X	Rate	X	Rate	X	Rate	X	Rate	X	Rate
10	7.55	30	2.50	50	1.55	70	1.10	90	0.85
12	6.30	32	2.40	52	1.45	72	1.05	92	0.80
14	5.40	34	2.20	54	1.40	74	1.05	94	0.80
16	4.75	36	2.10	56	1.35	76	1.00	96	0.80
18	4.25	38	2.00	58	1.30	78	1.00	98	0.80
20	3.80	40	1.90	60	1.30	80	0.90	100	0.75
22	3.45	42	1.80	62	1.25	82	0.90	120	0.60
24	3.15	44	1.70	64	1.15	84	0.90	140	0.55
26	2.90	46	1.65	66	1.15	86	0.85	160	0.50
28	2.70	48	1.60	68	1.10	88	0.85	180	0.45

## SCHEDULE D

### Plumbing

Average cost per fixture, including supply, waste and vent lines, materials for rough and finish, labor and contractors overhead and profit. The difference between the residential rate and the commercial/industrial price is primarily attributable to the longer pipe and sewer runs required to accommodate the latter type of construction. The residential rate is to be used for commercial structures only when the average unit size schedule is issued from Schedule C.

#### Conventional Fixtures

Residential	900
Commercial And Industrial	1600

Wash Fountains ("Bradly's")	36"	54"
Circular		
Granito & Fiberglass	2700	3100
Enameled Steel	3100	3400
Stainless Steel	3300	3800
Semi-Circular		
Granito & Fiberglass	2300	2700
Enameled Steel	2800	3200
Stainless Steel	3100	3400

#### Industrial Gang Sinks (30" Wide)

4' Long 4-Man Sink	
Fiberglass	1500
Enameled Steel	1800
Stainless Steel	2200
8' Long 8-Man Sink	
Fiberglass	2500
Enameled Steel	3100
Stainless Steel	3800

Industrial Shower Heads Each	500
Drinking Fountains	600
Refrigerated Water Coolers	1200
With Hot And Cold Water	1400

Shower Units	Enameled Steel	Stainless Steel
Column Showers		
Circular, 5 Person	2200	5300
Semi-Circular, 3 Person	1700	4100
Cornet, 2 Person	1700	3600
Multi-Stall Showers		
Circular, 5 Person	3100	6800
Semi-Circular, 3 Person	2500	5500
Cornet, 2 Person	2200	4800

Emergency Shower	1200
Emergency Eye Wash	600

**SCHEDULE E**  
**GC Special Features**

**Mezzanines**

Per square foot, including, soffit finish, lighting, heating and plumbing unless noted.

	Frame Type				
	1	2	3	4	
Unfinished					ac / grp
Light Util/Storage	10.20	14.65	15.35	16.50	1.96 / 6
Heavy Util/Storage	12.65	17.80	18.00	19.55	1.96 / 6
Semi - Finished					
Light Mfg	15.65	20.10	20.80	22.00	3.19 / 5
Heavy Mfg	18.10	23.25	23.40	24.95	2.75 / 5
Finished Open					
Retail	25.15	29.70	30.35	31.55	2.39 / 4
Lobby, Access Way	31.15	36.05	36.45	37.80	4.67 / 4
Office	32.65	37.50	38.00	39.30	6.08 / 3
Finished Divided					
Dinning/Lounge	38.90	43.55	44.15	45.35	4.42 / 4
Office	40.10	45.00	45.45	46.80	6.08 / 3

Add for air conditioning and sprinkler.

**Mall Concourse Areas**

Per square foot.

Costs include paving, ramps, stairs, lighting and typical permanent local elements, and architectural treatment, such as built-in seating, planters, etc.

**Open Mall**

Open air pedestrian concourse areas, generally referred to as an arcade or courtyard.

**Covered Mall**

Covered common areas, consisting of roof cover and open entrance areas. Minimal protection from weather conditions. Typical roof finishes include mansards or canopies. Apply costs to covered area only.

**Enclosed Mall**

Enclosed common concourse areas, completely climatized typical of modern shopping malls where concourse area is bordered on all sides by shops and stores.

Per S.F., average quality construction

Type	Construction	Rate
Open		8.95
Covered	Wood Frame	28.35
	Steel Frame	33.05
	Reinforced Concrrere	39.25
	F.P. Steel Frame	46.85
Enclosed	Wood Frame	46.40
	Steel Frame	50.10
	Reinforced Concrrere	59.55
	F.P. Steel Frame	61.35
	*Additive For Walls	4.00

Price basements from appropriate model in Schedule A.

Adjust for quality grade from Schedule F.

NOTE: That the above rates are based on a zero (0) P/A ratio, add for walls by applying the additive rate to the subject P/A ratio, and adjusting the result to account for the percentage of walls priced with the shop enclosures. For example, a "T" shaped concourse area 60' x 200' and 60' x 100' x 20' high with shops 16' high would have a perimeter of 720 L/F and a P/A ratio of 4 (720 L/F / 18,000 SF) with 180 L/F of walls full height and 540 L/F clerestory walls 4' high. This amounts to an average of 40% wall coverage (.25 x 100% + .75 x 20%). The additive for walls would therefore be calculated as 4 x the additive rate x 40%.

**Penthouses**

Per square foot

Elevators and Stairwells

	Area			
	50	75	100	150
Metal Or Light Wood Frame	51.80	43.90	39.20	33.60
Concrete Block Or Equal	101.70	85.40	75.70	64.20
Brick Or Equal	119.00	99.55	88.00	74.25

**Mechanical Rooms**

	Area									
	200	400	600	800	1000	1200	1400	1600	1800	2000
Metal Or Light Wood Frame	30.20	23.90	21.10	19.40	18.30	17.45	16.75	16.25	15.85	15.45
Concrete Block Or Equal	57.35	44.40	38.70	35.25	32.90	31.20	29.85	28.75	27.90	27.10
Brick Or Equal	66.00	50.55	43.65	39.55	36.80	34.70	33.10	31.80	30.75	29.85

NOTE: Price larger structures off of the GCI Utility Storage floor model.

## SCHEDULE E (continued)

### GC Special Features

#### Banking Features

Cost per square foot of floor area, based on an average 8' ceiling height, exclusive of floor and doors but including lighting, ventilation, and interior finish.

Type	Low Cost	Average	Good
Money Vault	131.67	172.71	213.75
Record Storage	52.64	62.72	72.80

Add for money vault doors (thickness of steel plating w/o locking mechanism)

Thickness	Rectangular	Circular
2"	7300	--
3"	10500	--
4"	18400	--
6"	27800	--
8"	35100	128500
10"	42600	137500
12"	52600	146800
14"	58900	157300
16"	71200	168000

Add for record storage vault doors

1/2 hour fire rating	1700
1 hour fire rating	3400
2 hour fire rating	4000
3 hour fire rating	4200
4 hour fire rating	4400
6 hour fire rating	5600

#### Drive-In Teller Booths

Per square foot including finish, lighting, heating, air conditioning (average quality construction) add for drive-in windows, adjust for quality grade from Schedule F.

Wall Hgt.	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	+/-
8'	123.91	135.19	146.46	157.73	169.00	180.27	191.54	202.81	2.25
9'	133.59	146.19	158.79	171.39	183.98	196.58	209.18	221.77	2.52
10'	143.21	157.13	171.05	184.98	198.90	212.82	226.75	240.67	2.78
Add per canopy, per square foot				24.00	38.06				

#### Atriums

Typical of those found in contemporart office buildings, hotels and high rise apartments

Equivalent No Stories		0	1	2	3	4	5	6	+1
12'	1	81.48	84.13	86.79	89.44	92.09	94.74	97.39	2.65
22'	2	88.31	93.22	98.12	103.03	107.94	112.84	117.75	4.91
32'	3	95.14	102.30	109.46	116.62	123.78	130.94	138.10	7.16
42'	4	101.51	111.38	120.80	130.21	139.63	149.04	158.46	9.41
52'	5	108.80	120.47	132.14	143.80	155.47	167.14	178.81	11.67
62'	6	115.63	129.55	143.47	157.40	171.32	185.24	199.17	13.92
72'	7	122.46	138.63	154.81	170.99	187.16	203.34	219.52	16.18
82'	8	129.29	147.72	166.15	184.58	203.01	221.44	239.87	18.43

Add per

add'l floor	6.83	9.08	11.34	13.59	15.85	18.10	20.35	2.25
-------------	------	------	-------	-------	-------	-------	-------	------

Per square foot for average quality structural, glazed and fireproofed steel frame construction, adjust for variations in quality grade from Schedule F. It should be noted, however, that typical atrium construction is characterized by good quality materials, workmanship and features.

Sprinkler system is priced from Group 4 of the sprinkler schedule. Air conditioning in atrium areas is considered overflow from the main structure and no separate square foot pricing is required to adjust the atrium value.

NOTE: The zero (0) perimeter -to-area ratio is applicable to those areas that have no perimeter walls and therefore must not include an allowance for walls in the square foot rate. These areas are typically found in high rise atriums where structural walls forming the perimeter of concourse shops, offices, hotel units and other such occupancies should be valued as part of that space by applying the appropriate model rather than part of the atrium proper.

Drive-up/walk-up teller windows, each	12200
Vision window only, per station	2000
Night depositories, each	14900

#### Autotellers

Complete with receptacle box, pneumatic tube, and intercom, each	23000
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#### Tellervues

Complete with receptacle box, pneumatic tube, 2-way screen and intercom, each	55000
---	-------

NOTE: The pneumatic tube described above refers to in-ground permanent type construction.

#### ATM Enclosures, per square foot, average quality

# of ATM	w/o Lobby	w/Lobby
1	635.00	298.00
2	361.00	219.00

Add for canopy, per square foot

24

Adjust for quality grade from Schedule F in Appendix C.

## SCHEDULE E (continued)

### GC Special Features

#### Health/Recreational Club Facilities

##### Sauna Baths

Per item including heater and controls

6 x 4 x 7' high	5400
6 x 5 x 7' high	5600
6 x 6 x 7' high	6800
6 x 9 x 7' high	8500
8 x 8 x 7' high	9500
8 x 10 x 7' high	10600
8 x 12 x 7' high	11800
10 x 12 x 7' high	13400

##### Steam Baths

Add 20% to sauna bath costs.

##### Whirlpools (Jacuzzi)

For apartments, motels, health clubs and offices with employee health facilities.

Number of persons	Concrete	Fiberglass
4	7000	5600
6	10900	8800
8	14700	11900
10	18700	15000

Indoor swimming pools, see commercial swimming pool schedul.

##### Marquees

Per square foot of horizontal area

	Wood Frame	Steel Frame
Low cost Installation	18.83	23.60
Average Installation	23.60	29.90
Good Installation, Elaborate Décor	29.17	37.66
High Cost Installation, lavish Décor	36.53	47.27

#### Passenger Elevators

Price per item (in hundreds of dollars)

Electric (passenger operated) geared, variable voltage control

	Capacity (100 lb)					
FPM	15	20	25	30	40	50
100	565	664	743	820	960	1086
150	659	760	847	932	1076	1203
200	736	841	936	1020	1165	1293
250	801	911	1005	1093	1239	1373
300	860	973	1068	1157	1305	1434
350	914	1028	1124	1212	1361	1496
400	960	1077	1174	1266	1411	1547
Add per st	47	48	48	48	49	49

For manual operated door, deduct ten percent (10%) of total.

Electric (completely automatic, group controlled) gearless, hi speed, hi rise.

	Capacity (100 lb)					
FPM	20	25	30	35	40	50
300	1309	1383	1460	1544	1630	1821
400	1445	1524	1612	1702	1803	2011
500	1595	1685	1782	1881	1989	2220
600	1756	1863	1966	2077	2196	2451
700	1946	2054	2170	2295	2424	2705
800	2149	2250	2398	2538	2678	2989
1000	2623	2772	2923	3087	3265	3643
1200	3194	3376	3561	3765	3980	4439
1400	3900	4114	4352	4593	4849	5413
Add per St	48	49	52	53	54	56

Add per express floor 2220

With openings, use cost per stop from table.

For attended, use eighty-five percent (85%) of total cost.

#### Hydraulic passenger (power doors)

	Capacity (100 lb)					
FPM	15	20	25	30	40	50
50	230	281	324	367	443	518
75	285	339	391	437	524	604
100	328	388	451	496	588	675
125	366	431	494	545	643	734
150	400	472	535	594	696	787
200	463	544	609	672	780	877
Add per st	87	91	97	101	107	113

For manual operated doors, deduct ten percent (10%) of total.

Electric (residential type)

20 FPM	350 lb capacity, 2-stops	140
	500 lb capacity, 2-stops	280
	Add per additional stop	25

#### Incline lifts

Single passenger, 20' travel	7200
Two - passenger, 20' travel	8600
+/- 1' travel	81

## SCHEDULE E (continued)

### GC Special Features

#### Conveying Systems

##### Freight Elevators

Per item (in hundreds of dollars)

Hydraulic, push button operation

FPM	Capacity (100 lb)									
	20	30	40	50	60	80	100	120	150	200
50	217	252	276	301	319	349	528	624	763	992
100	290	316	345	366	383	413	621	728	888	1116
125	335	362	387	404	421	441	673	786	954	1221
150	382	411	435	452	481	492	731	853	1025	1326
Add per stop										
Manual	58	63	66	69	71	76	80	82	88	93
Power	109	115	119	124	128	134	136	141	146	151

Electric, variable voltage control, push button operation

FPM	Capacity (100 lb)									
	20	30	40	50	60	80	100	120	150	200
100	625	664	702	725	743	774	829	937	1045	1233
200	705	758	809	845	871	919	996	1189	1382	--
300	798	867	936	982	1020	1086	1191	--	--	--
400	905	990	1075	1140	1194	1286	1437	--	--	--
Add per stop										
Manual	59	63	68	70	74	77	81	85	88	93
Power	112	117	120	125	129	135	139	142	147	154

Manual controls - deduct ten percent (10%) from base cost and use manual door cost for stops.

##### Rear Doors

Add to either the passenger or the freight elevators listed above:

Manual first stop	75
Additional stop	58
Power first stop	130
Additional stop	112

##### Sidewalk Elevators (electric or hydraulic)

One floor, 2000 - 3000 lb capacity 36594

##### Moving Walks

Per L/F at 2% gradient

Length (Ft)			
	36"	48"	54"
100	2315	2524	2591
300	1695	1830	1897
500	1517	1621	1725
750	1418	1486	1590
1000	1314	1418	1486
1400	1210	1345	1382
1800	1142	1210	1314

For variations in gradients (percentage of rise per linear foot of run) add seven tenths percent (.7%) to the base rate for each additional percent of rise. For example, the base rate for a one hundred feet (100') walk with a rise of fifteen feet (15') (fifteen percent (15%)) would be increased by nine and one-tenth percent (9.1%) (15 - 2 x .7%); the rate for a one hundred fifty feet (150') walk with a rise of fifteen feet (15') (ten percent (10%)) would increase five and six-tenths percent (5.6%) (10 - 2 x .7%).

##### Escalators

Per moving stairway (in hundreds of dollars)

32" Width		40" Width	
Rise in Feet	Cost	Rise in Feet	Cost
10	1140	10	1239
14	1212	14	1323
18	1275	18	1409
22	1350	22	1509
25	1409	25	1578

## SCHEDULE E (continued)

### GC Special Features

#### Boilers - Gas And Light Oil Fired

Costs are for industrial type package boilers including pumps, controls and gauges. Costs are for rated horsepower. Boiler output may also be rated in terms of B.T.U. per hour, or pounds of steam per hour at two hundred twelve degrees Fahrenheit (212 F).

1 hp = 33,500 BTU per hour

= 139 square feet of steam radiation

= 223 square feet of water radiated

= 34.5 pounds of steam per hour

1 lb. steam per hour = 970 Btu per hour

1 sq. ft. of equivalent steam radiation = 240 BTU per hour

1 sq. ft. of equivalent water radiation = 150 BTU per hour

Low pressure, fifteen (15) pounds steam, thirty (30) pounds water.

Rated Horsepower	Fire Tube	Scotch Marine	Water Tube
4	--	--	2800
6	7700	--	4100
10	10300	--	5900
15	13300	10700	7700
20	15600	12500	9600
30	19900	16300	12900
40	23600	19200	16300
50	27100	21700	19200
75	34000	27900	25700
100	40500	32900	31800
150	51800	42400	43100
200	61200	50300	--
300	77900	63700	--
400	92300	76000	--
500	105700	86900	--
600	117800	97400	--

#### High Pressure

125 pounds water, factor above	1.38
150 pounds steam, factor above	1.54

#### Cold Storage Facilities

To estimate total costs of a cold storage plant, determine cost of basic building, then add for insulation and doors. Add for enclosure wall from unit cost tables.

#### Insulation

Per square foot of surface area

Insulation Thickness	Cork Board	Styrene	Fiberglass Board	Foamglass Board	Mineral Wood Batts	Urethane
1"	5.71	4.61	5.10	5.83	4.61	5.10
2"	6.69	4.79	5.22	7.06	4.73	6.02
4"	8.90	5.22	5.71	8.96	5.22	7.61
6"	10.44	5.77	6.14	11.17	5.65	9.33
8"	12.28	6.26	6.57	13.32	6.14	10.99
10"	14.24	6.75	7.06	15.35	6.63	--

#### Cold Storage Doors

Per square foot of surface area

Thickness	To 15 Sq. Ft	16 - 25 Sq. Ft	26 - 40 Sq. Ft	Over 40
4"	116.78	102.17	87.86	74.97
6"	124.83	110.89	97.93	85.41
8"	133.55	120.96	108.74	97.26

#### Sliding doors

Single add	0.31
Double add	0.55



## SCHEDULE E (continued)

### GC Special Features

#### Dock Facilities

Per Square Foot

#### LOADING DOCKS

Concrete on fill

	Height	Perimeter Area Ratio				
		5	10	15	20	30
Concrete Grade Walls	3'6"	7.80	10.60	13.40	16.15	21.75
	+ / -1'	0.10	0.20	0.25	0.30	0.50
Concrete Block Grade Walls	3'6"	7.25	9.45	11.65	13.90	18.30
	+ / -1'	0.10	0.20	0.25	0.30	0.50

A loading dock has either poured concrete or concrete block perimeter grade walls built on 12' x 18' strip footings with approximately 3'6" of the wall above grade. Many loading docks are 3 - sided additions to existing structures, so calculating the perimeter for the perimeter-to-area ratio represents only the length of the three (3) sides.

#### DEPRESSED TRUCK AND TRACK AREAS (INSIDE)

Concrete Grade Walls	
3'6" Deep, per linear foot	55.70
+ / -1'	11.15
Concrete Block Grade Walls	
3'6" Deep, per linear foot	44.15
+ / -1'	7.85
Add per cubic foot of depressed area for excavation	0.30
Deduct for earth floor, per square foot	3.25
Deduct for asphalt paving, per square foot	1.05

A depressed truck or track area occurs within the interior of a building. For example, a company builds a building at the surrounding grade level terrain and then excavates an area that is 3'6" lower depression within that building to accommodate the movement of goods by either truck trailers or railroad cars. The square footage of this lower area is a depressed truck or track area.

#### Canopies

##### INDUSTRIAL DOCK TYPE

Per square foot

Basic, corrugated metal or composition, wood or steel deck and framing, without soffit or lighting	6.05 to	8.80
Add for soffit and lighting		3.45

##### COMMERCIAL TYPE

Per square foot including lighting and soffit

Low cost, unfinished soffit	12.65
Average, finished soffit	14.75
Good, finished soffit, lighting	17.50
High cost, finished soffit, lighting	19.10 to 28.85

NOTE: Refer to the residential schedule for patios, porches, porticos, wood decks, balconies, and other residential type features.

#### STRUCTURAL DOCKS

Wood floor	
Light timber or steel supports	9.45
Heavy timber or steel supports	13.25
Concrete Floor	
Light steel or concrete supports	11.25
Heavy steel or concrete supports	16.95
Add for canopies from below.	
A structural dock has either steel or concrete piers inserted into the ground that support the weight associated with a dock. The dock itself is built with either a steel or wood structural frame and capped with a wood or concrete floor.	

#### TRUCK WELLS AND RAMPS

Concrete paving, per square foot (incl. fill or excav)	3.80
Asphalt paving, per square foot (incl. fill or excav)	2.75
Concrete grade walls, per linear foot	
0' to 3'6" deep or rise	38.95
+ / -1' deep or rise	11.15
Concrete Block Grade Walls	
0' to 3'6" deep or rise	32.30
+ / -1' deep or rise	7.85

A ramp is an incline that starts at ground level and slopes or rise upward to a specific point. A truckwell is an incline that begins at ground level and slopes or falls downward to a specific level. In both instances, side walls are constructed of either poured concrete or concrete block to hold in or hold out dirt or fill materi.

## SCHEDULE G (continued)

### Yard Improvements

#### Fencing

Per linear foot including normal walk-in gates

	Height						
	4'	6'	7'	8'	9'	10'	12'
Galvanized Chainlink							
7 gauge	10.13	14.92	17.19	19.46	21.67	23.88	28.31
8 gauge	8.78	12.77	14.80	16.82	18.79	20.75	24.62
Aluminum	23.95	35.92	41.87	47.89	53.91	59.87	71.84
Iron	52.62	78.90	92.04	105.24	118.38	131.52	157.86
Modular steel	25.24	37.82	44.09	50.41	56.73	63.00	75.64

Add for top rail					1.78		
Add for 3 strands of barbed wire					2.27		
Add for service gates, per square feet		4.42		to	8.90		
Deduct for large installations							
1- 3000 linear foot					-10%		
3-6000 linear foot					-15%		
Over					-20%		

#### WOOD FENCE

Per liner foot

Basket weave		
5' high	21.24	
6' high	22.72	
Plank		
5' high	17.56	
6' high	19.65	
Split Redwood		
5' high	17.99	
6' high	19.65	

#### Masonry Walls

Per liner foot	6'	+/-1
4" Concrete Block, painted	48.94	6.69
6" Concrete Block, painted	57.35	7.68
8" Concrete Block, painted	67.54	8.47
4" Solar Screening Block		
6" x 6"	94.25	14.24
8" x 8"	73.99	10.87
12" x 12"	55.57	7.80
8" Common Brick	126.12	18.24
12" Common Brick	175.73	23.82
4" Face Brick	86.51	12.96
8" Face Brick, 2 sides	158.90	23.70
12" Face Brick, 2 sides	208.51	29.29
4" Concrete	77.73	12.96
6" Concrete	98.24	14.49
8" Concrete	110.64	15.66

This schedule may be applicable to agricultural fertilizer containment walls as well.

#### Paving

Per square foot

##### ASPHALT

2" ON 5" BASE	2.15
Under 20,000 square feet	1.96
20,000-50,000 square feet	1.72
Over 50,000 square feet	2.64
Add for sand finish course, 3/4" thick	0.25
Add for gravel surfacing	0.31
Add or deduct per 3" base	2.33
Heavy duty or industrial work areas	

##### CONCRETE

3" on 4" base	2.82
4" on 4" base	3.13
5" on 4" base	4.18
6" on 4" base	5.22
8" on 4" base	6.14
12" on 4" base	7.18

Add or deduct per 2" of base	0.25
Heavy roadways or industrial work areas	5.28

##### MACADAM PENETRATION

4" base	0.43
6" base	0.61
8" base	0.86

##### CRUSHED STONE PAVING

3/4", delivered	
3" deep	0.43
6" deep	0.74

NOTE: All paving prices, include service station and fast food restaurants, should be derived from the above schedules.

#### Guardrails

Per liner foot	
Metal guard rail, pipe or post	23.03
Barriers posts or poles	17.56

#### Railroads Siding

Per liner foot, includes rails, wood ties and ballast		
Weight or Rail	Cost	Add for Switch Turnout
40#	63.36	15100
60#	79.64	18300
80#	93.88	20900
100#	106.34	23200
115#	115.25	24800
130#	123.29	26500

Add per liner foot of trestles	
Single track	294
Double track	417
Add per liner foot of steel ties embedded in concrete	98

**SCHEDULE G (continued)****Yard Improvements****Retaining Walls**

Per liner foot including excavation and backfill, to be considered only if they add value as an improvement over and above the curing contribution in the site valuation.

**PLAIN CONCRETE, GRAVITY TYPE, NO REINFORCING**

	6'	8'	10'
Level Backfill	200.00	263.00	389.00
Sloping Surcharge (33Deg)	220.00	306.00	431.00

**REINFORCED, CANTILEVER TYPE**

	6'	8'	10'	20'
Sloping Surcharge (33Deg)	200	243	336	—
500Lb. Per L. F.. Surcharge	—	—	—	937

**CONCRETE CRIBBING**

Per square foot of face including excavation and backfill

	Open Face	Closed Face
12' High	40.09	42.06

**STEEL BIN TYPE**

Per square foot, based on 10' wide section

Height	Depth	Cost
4'	5'6"	36.47
8'	5'6"	37.76
0'	7'6"	44.88
12'	7'6"	46.85
16'	7'6"	50.35
16'	10'	57.96
20'	10'	59.80
20'	12'	61.77
24'	12'	63.49
24'	14'	69.08
28'	14'	71.04

**Commercial Docking Facilities****SMALL BOAT MARINA**

Typical installation, including ramps, anchor piers, utilities lockers, etc.;

Range (per slip) 4800 to 8500

Typical wood deck on posts & piling, per sq. ft.

Light Construction	21.37
Medium Construction	33.52
Heavy Construction	60.11

Heavy construction deck on piling for major shipping 89.21

**MOORING CLUSTERS AND CELLS**

	20'	30'	40'
Cluster of 3 Wood Piles	982	1474	1965
Cluster of 5 Wood Piles	1596	2456	3193

**Bridges**

Typical costs per square foot of deck, including, erection foundation

**PEDESTRIAN**

	Width	Span	Costs
Precast Concrete	8'	60'	62.51
	8'	100'	68.46
	8'	120'	77.43
	8'	150'	86.33
Steel, Trussed or Arched	8'	40'	59.56
	8'	50'	62.51
	8'	60'	65.51
	8'	80'	77.43
	8'	100'	86.33
	8'	120'	113.16
	8'	150'	122.06
	8'	160'	128.02
	10'	80'	56.55
	10'	120'	89.34
Wood, Laminated type	10'	150'	104.20
	10'	200'	142.94
		80'	53.60
		130'	59.56

**HIGHWAY**

	Low Costs	Median	High Costs
Concrete	49.12	88.42	152.27
Steel	54.03	97.01	173.15

**SKYWAY**

	Low Costs	Median	High Costs
Enclosed Walkway	284.90	365.94	438.40

**CELLS, STEEL PILING, FILLED AND CAPPED**

Per Each

	20'	30'	40'
3' Square	5400	8100	10700
4' Square	7400	10900	14500
6' Square	11300	16800	22200
8' Square	15600	23000	30300
4' Diameter	6100	9100	12000
6' Diameter	9500	13900	18400
8' Diameter	12900	19000	25200
12' Diameter	20500	30000	39400
20' Diameter	37700	54500	71300

## SCHEDULE G (continued)

### Yard Improvements

#### Tanks

- 1 Barrel of oil = 42.0 gallons
- 1 Barrel of water = 31.5 gallons
- 1 Gallon of water = 8.34 pounds
- 1 Gallon of water = .1337 cubic feet

Capacity of cylindrical tanks or reservoirs (per foot of depth or height).

Diameter (feet)	U.S. Gal	Barrels (42) gal	Diameter (feet)	U.S. Gal	Barrels (42) gal
1'0"	5.87	0.1	27'	4283.00	102.0
1'6"	13.22	0.3	28'	4606.20	109.7
2'0"	23.50	0.6	29'	4941.00	117.6
2'6"	36.72	0.9	30'	5287.70	125.8
3'0"	52.87	1.3	31'	5645.70	134.4
3'6"	71.97	1.7	32'	6016.20	143.2
4'0"	94.00	2.2	33'	6398.10	152.3
4' 6"	118.97	2.8	34'	6790.70	161.6
5'0"	146.88	3.5	35'	7196.00	171.3
5'6"	177.72	4.2	36'	7613.30	181.3
6'0"	211.51	5.0	37'	8041.90	191.5
6'6"	248.23	5.9	38'	8482.40	202.0
7'0"	287.88	6.8	39'	8934.90	212.7
7'6"	330.48	8.0	40'	9398.70	223.8
8'0"	376.01	9.0	41'	9875.80	235.1
8'6"	424.48	10.1	42'	10362.00	246.7
9'0"	475.89	11.3	43'	10861.60	258.6
9'6"	530.24	12.6	44'	11374.00	270.8
10'	587.48	14.0	45'	11895.30	283.2
11'	710.90	16.9	46'	12430.10	296.0
12'	846.03	20.2	47'	12976.10	309.0
13'	992.91	23.7	48'	13534.80	322.3
14'	1151.50	27.4	49'	14104.00	335.8
15'	1321.90	31.5	50'	14685.00	349.0
16'	1504.10	35.8	60'	21149.30	503.6
17'	1697.90	40.4	70'	28768.50	685.5
18'	1903.60	45.3	80'	37598.70	895.3
19'	2120.90	50.5	90'	47585.90	1133.1
20'	2350.10	56.0	100'	58748.00	1339.0
21'	2591.00	61.7	120'	84597.10	2014.5
22'	2843.60	67.7	140'	115146.10	2742.0
23'	3108.00	74.0	160'	150394.90	3581.4
24'	3384.10	80.6	180'	190343.50	4532.7
25'	3672.00	87.4	200'	234992.00	5596.0
26'	3971.60	94.6	220'	284340.30	6771.2

Capacity in barrels (oil) = D power of 2 x .1399 x height  
(diameter and height in feet)

Capacity in gallons = D to the power of 2 x 5.8748 x height  
(diameter and height in feet)

#### Oil Storage

##### BOLTED STEEL TYPE

Standard A. P. I. tanks. Costs include roof deck and supports, sand and gravel foundation with retaining ring, painting and typical basic fittings.

Capacity (Barrels)	Size Dia x Hgt	Cost
100	9' x 8'	6,600
200	9' x 16'	10,300
300	9' x 24'	14,500
400	9' x 32'	19,000
500	16' x 16"	22,900
750	16' x 24'	30,300
1000	22' x 16'	38,000
1500	22' x 24'	51,000
2000	30' x 16'	62,900
3000	30' x 24'	71,100
4000	39' x 16'	76,700
5000	39' x 24'	82,200
7500	39' x 36'	101,000
10000	55' x 24'	122,000
15000	55' x 36'	159,000

##### WELDED STEEL TYPE

Costs include foundations, cone roofs with support outside ladder, steel right curb.

Capacity (Barrels)	Size Dia x Hgt	Cost
2,000	30' x 16'	64,200
3,000	30' x 24'	72,500
4,000	30' x 32'	81,200
5,000	38' x 24'	92,200
7,500	38' x 36'	108,100
10,000	55' x 24'	136,100
15,000	55' x 36'	170,600
20,000	60' x 40'	207,200
25,000	60' x 50'	241,700
30,000	80' x 34'	276,200
40,000	80' x 45'	315,700
45,000	90' x 40'	355,400
50,000	90' x 44'	394,900
75,000	120' x 36'	552,400
100,000	140' x 37'	711,100
125,000	160' x 35'	864,500
150,000	180' x 33'	1,012,200
200,000	220' x 36'	1,236,000
250,000	220' x 36'	1,305,000
300,000	240' x 37'	1,839,400
350,000	260' x 37'	1,878,100
400,000	260' x 42'	2,071,400
500,000	280' x 46'	2,451,200

Add for pontoon floating roof per

foot of diameter 1,068 to 1,928

Add for double deck roof

per foot of diameter 1,179 to 1,449

## SCHEDULE G (continued)

### Yard Improvements

#### Elevated Steel Tanks

Per item including foundation, riser pipe, foot case, ladder and walkway, completely installed.

Capacity (Gallons)	Costs (in \$ 1000) for Tower Heights			
	50'	75'	100'	150'
15,000	155	173	201	264
20,000	158	177	206	268
25,000	163	181	210	273
30,000	167	185	215	278
40,000	172	190	219	282
50,000	177	195	223	287
60,000	192	212	242	306
75,000	209	232	262	323
100,000	226	248	279	343
125,000	253	276	306	368
150,000	279	303	333	397
200,000	373	404	435	496
250,000	419	457	488	548
300,000	465	510	540	602
400,000	546	597	624	691
500,000	610	663	713	788
750,000	799	865	941	1,060
1,000,000	1,011	1,090	1,189	1,332
1,500,000	1,406	1,514	1,655	1,874
2,000,000	1,799	1,933	2,121	2,419
Factor*	1.41	1.41	1.41	1.47

\* For high stress hurricane and earthquake areas

#### Welded Steel Pressure

Costs include horizontal installation on legs or saddle pad including normal fittings but not foundations or base plates.

Capacity (Gallons)	Size Dia x Hgt	Cost
125	2' x 6'	610
250	2'6" x 9'	860
500	3'6" x 8'	1,600
1000	3'6" x 16'	2,820
1500	5' x 11'	4,050
2000	5' x 15'	5,280
2500	5' x 19'	6,510
3000	5' x 22'	7,860
4000	5' x 29'	10,320
5000	5' x 36'	12,770
7500	6' x 37'	19,030
10000	6' x 50'	25,170
12500	6' x 61'	35,240
15000	7'6" x 50'	41,380
20000	7'6" x 65'	51,820
25000	9'6" x 51'	62,140
30000	11' x 47'	72,450
35000	11' x 52'	82,890
40000	11' x 57'	93,210
45000	11' x 63'	103,520
60000	11' x 90'	134,590
90000	11' x 133'	197,460

#### Towers

Per item of painted towers for flat bottom tanks, including added cost of erection of tank above ground, footings, pipe to ground and balcony.

Capacity (Gallons)	Tower Height				
	12'	25'	50'	75'	100'
1,000	4800	5900	—	—	—
1,500	5500	7100	11500	—	—
2,000	6300	7900	12800	20100	—
3,000	7200	9000	14400	22800	36200
5,000	8500	10800	17200	26300	41400
10,000	11400	13800	21400	32400	49300
20,000	14500	17400	26800	40000	59100
30,000	17000	20100	30100	44600	66000
40,000	19000	22500	33200	49000	70500
50,000	—	24600	35600	51400	77400
75,000	—	—	40800	60000	92500

#### Bulkheads Piling

Sea walls, cost per linear foot where typically installed, 10'-14' depth for small residential jobs. For large commercial projects, cost may be 50% lower.

Creosoted wood, 8" to 12" including tieback	220	300
Concrete, precast, 5" to 6" including ties and piling.	390	650
Rubble stone, 3' including 1' of bedding	530	700

#### Earth Dikes

Per cubic foot 0.61

## SCHEDULE G (continued)

### Yard Improvements

#### Wood Water Storage

Per item, redwood or fir

Capacity (gallons)	Size (Dia x Hgt)	Tank Cost	Flat Cover	Conical Cover	Chime Joists	Wood Ladder	Steel Ladder
1,000	6 x 6	3800	500	900	100	100	200
1,500	7 x 7	4200	600	1000	100	100	200
2,000	8 x 6	5900	700	1200	190	100	200
3,000	8 x 8	7400	700	1200	190	190	200
4,000	9 x 9	8800	900	1600	300	190	200
5,000	11 x 8	10100	1100	1800	400	190	200
7,500	12 x 10	12600	1500	2000	400	200	300
10,000	14 x 10	26000	1700	2500	700	200	300
15,000	14 x 14	19600	1700	2500	700	300	400
20,000	16 x 14	23800	1900	3000	900	300	400
30,000	18 x 16	30300	2100	3300	1100	400	400
50,000	22 x 18	41400	2600	4500	1400	400	500
75,000	26 x 20	52900	3000	5500	1700	400	500
100,000	30 x 20	62900	3600	6700	2000	400	500
150,000	37 x 20	80100	4600	8500	2800	400	500
200,000	43 x 20	95300	5200	10400	3400	400	500

Add 33% for cypress tanks.

Add tower cost for elevated tanks.

Add for concrete slab foundations, per cubic foot.

5.89 to 7.61

Add cover, joists, and ladders to basic tank cost as necessary.

#### Standpipes and Surface Reservoirs

Cost includes foundation, roof, ladders and typical accessories.

#### WELDED STEEL STANDPIPE - Height exceeds diameter

Capacity (gallons)	Cost	Capacity (gallons)	Cost	Capacity (gallons)	Cost
10,000	23,100	200,000	139,000	2,000,000	642,900
20,000	36,700	250,000	156,700	2,500,000	751,600
30,000	48,600	300,000	173,600	3,000,000	860,000
50,000	66,300	400,000	217,100	4,000,000	1,049,200
75,000	86,700	500,000	254,800	5,000,000	1,226,700
100,000	105,600	750,000	327,300	6,000,000	1,398,900
125,000	114,000	1,000,000	378,000	7,500,000	1,634,000
150,000	123,000	1,500,000	528,000	10,000,000	1,996,100

#### CONCRETE WATER TANKS - (Surface reservoirs)

Capacity (gallons)	Cost	Capacity (gallons)	Cost	Capacity (gallons)	Cost
10,000	43,500	200,000	256,900	2,000,000	949,000
20,000	65,900	250,000	291,800	2,500,000	1,081,300
30,000	83,500	300,000	328,600	3,000,000	1,216,900
50,000	114,900	400,000	389,000	4,000,000	1,488,700
75,000	143,900	500,000	440,200	5,000,000	1,762,100
100,000	170,600	750,000	564,500	6,000,000	2,030,000
125,000	193,000	1,000,000	665,300	7,500,000	2,445,700
150,000	217,800	1,500,000	808,500	10,000,000	3,129,200

Reservoirs-typical costs of cut and fill reservoirs with concrete or asphalt linings and wood roof structures, per unit of rated capacity \$.25 per gallon or \$80,065.60 per acre foot.

## SCHEDULE G (continued)

### Yard Improvements

#### Dry Storage Bins

Typical cost per item for bolted steel industrial type bins  
(to 55# per cubic foot), installed complete.

#### CYLINDRICAL TYPE, including foundation and floor slab

Diameter	HEIGHT								
	24'	32'	40'	48'	56'	64'	72'	80'	88'
9'	6200	8000	9200	10600	12000	13300	14500	—	—
12'	9700	11500	15700	17300	18900	20500	22100	—	—
15'	13000	16300	19400	22500	25300	28200	30900	33800	—
18'	16900	21100	25300	29200	33200	36800	40600	44200	47800
21'	—	27800	33000	37800	42600	46900	51100	55600	60000
26'	—	38700	44800	51100	57300	63500	70500	76600	82900
32'	—	52400	62500	71500	80400	89000	97700	105500	113200

#### HOPPER TYPE, including foundation and floor slab

Diameter	HEIGHT					
	16'	24'	32'	40'	48'	56'
9'	7400	9100	10200	11400	—	—
12'	10900	13500	15100	17300	18900	20500
15'	—	17800	21200	24100	26800	29000
18'	—	23000	27600	31900	35400	38800
21'	—	28100	35200	41400	46300	—

#### Factors for

80# Cylindrical	1.29	Hopper	1.35
100# Cylindrical	1.41	Hopper	1.41

#### Bulk Storage Tanks

##### VERTICAL BULK STORAGE

Cost are for 10 and 12 gauge bolted galvanized tanks,  
including sand & gravel foundations, fittings and roof.

Capacity (Gallons)	Cost	Capacity (Gallons)	Cost
2,000	4421	15,000	14490
3,000	5280	20,000	17929
4,000	6017	30,000	25542
5,000	6877	40,000	33156
7,500	8719	50,000	40401
10,000	10806	60,000	48015

Add for concrete slab foundations, per SF 3.93

##### HORIZONTAL BULK STORAGE

Cost are for completely installed tanks, including saddles  
or legs and fittings.

Capacity (Gallons)	Cost	Capacity (Gallons)	Cost
1,000	2333	7,500	6754
1,500	2579	10,000	8350
2,000	2947	12,500	10070
3,000	3684	15,000	11789
4,000	4298	20,000	15104
5,000	4912	25,000	18543
6,000	5526	30,000	21490

#### Fuel Oil Tanks

Per item for underground steel tanks,  
installed complete, including excavation  
and backfill.

Capacity (Gallons)	Shell	Cost
500	10 GA	3807
1,000	3/16"	4544
2,000	3/16"	6386
3,000	3/16"	7122
4,000	3/16"	8105
5,000	1/4"	9210
7,500	1/4"	11666
10,000	1/4"	14245
12,500	5/16"	17560
15,500	5/16"	20876
20,000	5/16"	26525
30,000	3/8"	41138

## SCHEDULE G (continued)

### Yard Improvements

### Steel Tanks and Corrugated Metal Bins

Capacity (Bushel)	Bolted or Welded Steel	Corrugated Metal (Per Bin)
15,000	2.49	1.45
20,000	2.37	1.40
25,000	2.28	1.34
30,000	2.22	1.31
35,000	2.16	1.29
40,000	2.12	1.26
50,000	2.05	1.22
60,000	1.98	1.18
80,000	1.89	1.14
100,000	1.83	1.09
125,000	1.76	1.06
150,000	1.71	1.03
175,000	1.67	1.02
200,000	1.62	0.98
250,000	1.58	0.96
300,000	1.56	0.93

### Grain Elevators

Cost Per Bushel					
Total Bushel Capacity	Wood Crib/Metal/Clad Elevator Annex		Concrete (Slip Form Construction) Elevator Annex		
8,000	14.61	8.47	13.09	7.88	
10,000	13.35	7.66	11.74	7.07	
15,000	11.33	6.91	10.66	6.31	
20,000	10.09	6.24	9.77	5.82	
25,000	9.21	5.65	9.10	5.46	
30,000	8.56	5.22	8.49	5.19	
40,000	7.63	4.59	7.95	4.79	
50,000	6.96	4.16	7.52	4.51	
75,000	5.91	3.48	6.82	4.03	
100,000	5.26	3.06	6.35	3.71	
150,000	4.47	2.55	5.76	3.32	
200,000	3.97	2.25	5.37	3.06	
250,000	3.63	2.05	5.08	2.87	
300,000	3.38	1.88	4.85	2.74	
400,000	3.01	1.66	4.52	2.52	
500,000	2.75	1.50	4.27	2.37	
750,000	2.49	1.38	3.87	2.11	
1,000,000	2.25	1.29	3.61	1.95	
Over	2.01	1.22	2.96	1.56	

### Horizontal Storage

The following costs are for horizontal or flat storage without loading and/or unloading systems.

Capacity (Bushel)	Cost Per Bushel	
	Wood	Steel
50,000	1.19	1.26
75,000	1.12	1.20
100,000	1.06	1.15
150,000	0.99	1.09
200,000	0.95	1.06
250,000	0.91	1.02
300,000	0.88	0.99
400,000	0.85	0.96
500,000	0.81	0.93
750,000	0.76	0.87
1,000,000+	0.72	0.85

### Trench and Bunker Silos

Per square foot

#### Horizontal Silos

	Ground Floor Area (square feet)					
	2000	3000	4000	5000	6000	8000
Tilt-up concrete panels and precast wall supports, sealed, concrete floor	12.61	10.89	9.95	9.26	8.79	7.85
Poles and braces, tilt-up concrete panels, concrete floor	10.19	8.87	8.15	7.64	7.28	6.52
Cantilevered poles, plywood or tongue and groove walls, concrete floor	8.87	7.81	7.26	6.83	6.55	5.92



## SCHEDULE G (continued)

### Yard Improvements

#### Brick and Concrete Stacks

Per item (in thousands of dollars)  
including normal foundation, brick lining for  
1/3 of the height, Ladder and lighting rod.

Height	I.D. Top	Brick	Concrete
75'	4'	53	43
	5'	61	48
	6'	76	64
100'	4'	71	58
	5'	81	64
	6'	102	85
	7'	112	91
	8'	129	108
125'	5'	103	81
	6'	128	107
	7'	141	115
	8'	162	136
	9'	201	171
150'	6'	154	128
	7'	169	139
	8'	195	165
	9'	241	205
	10'	266	231
175'	7'	198	162
	8'	227	192
	9'	281	239
	10'	311	269
	12'	335	293
200'	8'	260	219
	9'	322	274
	10'	356	308
	12'	383	335
	14'	452	397
225'	8'	293	247
	10'	362	308
	12'	402	348
	14'	432	378
	16'	510	447
250'	10'	362	308
	12'	402	348
	14'	432	378
	16'	510	447
	18'	578	510

#### Steel Stacks

Per linear foot of height, installed complete  
including foundation and painted exterior.

Thickness	Diameter at Base							
(At Base)	18"	24"	30"	36"	48"	60"	72"	84"
10 gauge	156	199	238	281	355	436	502	--
8 gauge	179	228	275	316	403	483	564	--
1/4" Plate	--	295	349	403	510	610	704	804
3/8" Plate	--	--	--	510	637	771	872	973
1/2" Plate	--	--	--	--	737	872	1006	1140
Guy Wire (L/F)	0.41	0.48	0.53	0.60	0.70	0.81	0.87	0.93
Guy Band (Each)	44	68	86	104	146	192	235	286
Roof Flashing	308	436	570	704	1006	1308	1609	1944
Umbrella Top (Each)	115	176	242	316	476	--	--	--

## SCHEDULE G (continued)

### Yard Improvements

#### Incinerators

##### STEEL

Costs include scrubber, but do not include chimney.

Pounds per hour	Cost
50	16500
100	18300
200	23000
400	34900
600	54200
1000	128200

Add for feeder 6000 to 9300

##### BRICK

Cost include brick work, but do not include chimney or pollution control.

Pounds per hour	Cost
100	9100
200	11400
400	16600
600	21200
1000	30700
2000	55100
3000	79100
5000	127300

For refractory lining, add 200%

#### Chimneys

##### BRICK CHIMNEYS

Average cost per foot of height with tile flues, including foundation.

8" square or round flue	67.54
12" square or round flue	72.45
2-8" square or round flue	104.38
10" x 18" rectangle flue	99.47
1-8" and 12" square flue	119.12

##### METAL CHIMNEYS

Average cost per linear foot for fond galvanized metal stacks.

Size	Single Wall	Double Wall	Triple Wall
6"	24.19	26.40	28.24
8"	27.94	31.99	41.32
10"	37.09	46.36	57.90

Add for thru-the wall installations 178 282

Add for box framed decorative chimney housing per liner foot:

Wood or Stucco	17.93	to	26.77
Metal	35.86	to	53.17

#### Drive-In Theaters

Cost are broken into major cost items on a per space basis. Some theaters may be mixed in quality requiring substitution from another grade.

	D	C	B	A
Engineering	98	123	154	188
Grading	96	118	146	181
Paving	300	384	496	637
Screens	109	150	210	289
Ticket Booth	10	14	16	18
Miscellaneous				
Landscaping, etc.	66	96	140	204
Cost per car space	680	884	1160	1515

#### UNIT COST

The following cost may be used to either make adjustments to the cost per space pricing or build-up method to develop a complete theater cost.

	Low	Average	Good
Screen, per sq. ft. of screen area			
Wood frame on poles	17.31	18.79	22.10
Wood frame on timbers:			
Plain	21.00	24.68	28.74
Ornate	28.00	32.79	38.74
Steel frame:			
Plain	23.58	29.47	36.47
Ornate	31.68	37.21	43.90
Concrete, with steel-framed			
screen enclosure	35.37	43.53	53.11
Ticket Booths, each	5164	6490	7816

NOTE : Refer to the 30-year life table for depreciation

NOTE : All other buildings including projection booths and security fencing should be priced from the appropriate schedule.

**SCHEDULE G (continued)****Yard Improvements****Greenhouses**

Price per square foot of floor space.

Cost includes foundation, light masonry of frame sill walls, glazed upper walls (6' to 7' overall eaves height), roof ventilation, lighting and water service.

Costs does not include heating and ventilation systems, special watering or sprinkler systems, and planting benches.

Type and Quality	Square Foot Area														
	500	1000	2000	3000	5000	10000	20000	30000	40000	50000	60000	70000	80000	90000	Over
Good aluminum/steel	34.45	31.85	28.45	25.50	23.10	19.70	16.75	15.05	14.10	13.65	12.90	12.35	11.95	11.65	11.35
Average steel	25.60	24.00	21.85	19.75	17.65	15.10	12.90	11.55	10.85	10.45	9.80	9.40	9.10	8.85	8.60
Average pipe	23.05	21.60	19.65	17.80	15.90	13.55	11.60	10.40	9.75	9.40	8.85	8.45	8.15	8.00	7.80
Low cost wood frame	19.20	18.15	16.75	15.35	13.55	11.60	9.80	8.75	8.25	7.90	7.50	7.20	5.95	6.75	6.55
Add for paved floors and walks															
Concrete														2.10	
Asphalt														1.45	

Add for maintenance and utility buildings, per square foot

Cheap shed-type	10.80
Low cost frame, block or equal	23.90
Average cost block or equal	29.85
Average cost brick or equal	33.85
Good quality brick or equal	40.60

**INSTITUTIONAL AND CONSERVATORY GREENHOUSES**

Apply the following factors to the good aluminum and steel frame prices.

Typical installations	200%
High quality elaborate installation	300%

**Car Wash Buildings**

DRIVE - THRU CAR WASH (Stationary Type, Exterior - Wash)

Per square foot, average, completely installed.

	Good	Avg	Low Cost
Masonry/steel	73.75	68.40	63.00
Porcelain-Steel	89.50	81.65	73.75
Wood Frame/Stucco	68.05	62.65	57.30

Cost includes concrete slab, floor drains, basic electrical, lighting and water service and equipment enclosure. Add for restroom fixtures from general commercial schedule.

**DO-IT YOURSELF**

Per item, completely installed. (excluding equipment).

Good quality	
2-bay	33400
Each additional bay	11500
Average quality	
2-bay	27800
Each additional bay	9000
Low Cost	
2-bay	25100
Each additional bay	7900

**Swimming Pools**

Per square foot surface, reinforced concrete construction, including piping & water treating equipment, heaters, boards, ladders.

**MOTEL AND APARTMENT COMPLEX TYPE**

Square	Feet	Costs
1,000-1,200		60.00
1,300-1,500		58.15
1,600-2,500		54.65
2,300-2,500		49.75

**SWIM AND COUNTRY CLUB TYPE**

Square	Feet	Costs
2,500-4,000		52.25
5,000-6,000		47.10
7,000-9,000		43.80
10,000-20,000		40.70
Over		36.25
Add for diving 'L		5.10

Irregular shape	Add	31%
Separate whirlpool bath (range)	6600 to	17600
Add for ceramic tile, per sq. ft. tiled area		11.00
Add for concrete apron, per sq. ft.		3.80
Add for wading pool, per sq. ft.		9.45
Price fencing from appropriate schedule.		
Price buildings from appropriate schedule.		

**LARGE MUNICIPAL POOLS**

Complete include bathhouse

Per person capacity 2200 to 3300

## SCHEDULE G (continued)

### Yard Improvements

#### Golf Courses

##### REGULATION PLAY

Costs per hole are given for five (5) quality grades of golf courses. Ranging from cheaply build courses to excellent quality courses designed for professional play.

The costs for each grade have been developed to include the following:

1. Architectural fees to include engineering, planning and on-site supervision (range from six percent (6%) to ten percent (10%).
2. Normal site preparation and grading, and follow-up fairway seeding and landscaping.
3. Sprinkler installation to include the water source, pumps, piping and heads.
4. Roadway construction to include base preparation, paving and bridging for service roads and cart paths.
5. Green construction to include seeding and pre-opening maintenance.
6. Tee construction to include seeding and pre-opening maintenance.
7. Bunker construction to include pre-opening maintenance.

##### GRADE AA

Superior quality courses, design to accommodate professional championship play, eighteen (18) holes on one hundred eighty (180) acres of rolling and laked terrain, seven thousand two hundred (7,200) yards long; rated par seventy two (72) and featuring a completely automatic sprinkler system throughout, ten thousand (10,000) sq. ft. tiled greens, two thousand four hundred (2,400) sq. ft. tees with three (3) tee locations, an average of three (3) bunkers per hole and good quality asphalt paved roadways.

##### GRADE A

Excellent quality course, designed to accommodate professional championship play, eighteen (18) holes on one hundred sixty (160) acres of rolling and laked terrain, seventy two (72) and featuring a completely automatic sprinkler system throughout, eight thousand (8,000) sq. ft. tiled greens, two thousand one hundred (2,100) sq. ft. tees with two (2) to three (3) tee locations, an average three (3) bunkers per hole and good quality asphalt paved roadways.

##### GRADE B

Good quality private club type course, eighteen (18) holes on one hundred thirty (130) acres of rolling terrain, six thousand four hundred (6,400) to six thousand five (6,500) yards long, rated par seventy (70) and featuring an automatic sprinkler system serving the greens and tees, and manual system on fairways, five thousand (5,000) sq. ft. tiled greens, one thousand eight hundred (1,800) square feet tees with two (2) tee locations, an average of two (2) bunkers per hole, and good quality asphalt paved roadways.

##### GRADE C

Average quality public and municipal type course, eighteen (18) holes on one hundred ten (110) acres of primary flat terrain, six thousand (6,000) yards long, rated par sixty-seven (67) to seventy (70), featuring a semi-automatic sprinkler system, small tees and greens with few bunkers and average quality asphalt or gravel roads.

The true tax value of the golf course land is \$1,050 per acre.

##### BASE COST PER HOLE

AA Grade	216,000
A grade	156,000
B Grade	97,000
C Grade	66,000
D Grade	30,000

NOTE: The costs per hole, and components represent neither the best nor the cheapest quality courses and may be factored upward (ten percent (10%) of fifty percent (50)) or downward (10%) to fifty percent (50%)) as required.

For hybrid courses (courses exhibiting different quality grade features), it may be necessary to interpolate between grades.

##### TYPICAL COST RANGE FOR COMPONENTS

Tees	0.65	per SF
Bunkers	2.65	per SF
Greens		
Flat	2.40	per SF
Elevated	4.45	per SF
Lakes		
Asphalt lined	2.80	per SF
Plastic & sand	2.05	per SF
Sprinkler systems		
Manual	8400	per hole
Automatic	17900	per hole
Site preparation and landscaping	7000	per hole

##### SHORT PLAY

Cost range per hole, excluding structures and parking areas.

Executive courses, 18 holes on 50 to 60 acres, 58,900  
4,600 yards long including sprinkler system, excluding lighting

Par 3 course, 18 holes on 30 to 40 acres, 39,800  
2,800 to 3,000 yards long, including sprinkler system, excluding lighting

Pitch and putt, 9 holes on 10 to 15 acres, 30,200  
1,400 to 1,500 yards long including sprinkler system, excluding lighting

##### GOLF COURSE LAND VALUES

The reproduction cost for a regulation or short play golf course improvement includes a cost for the land of \$1,050 per acre without a consideration of productivity factors. The following formula is used to determine the true tax valued of a golf course.

STEP ONE: Determine the number of holes on the golf course.

STEP TWO: Multiply the number of determined in STEP ONE by the base cost per hole.

STEP THREE: Determine the amount if acreage in the parcel devoted to the golf course (greens, fairways, roughs, etc.).

STEP FOUR: Multiply the amount determined under STEP THREE BY \$1,050

STEP FIVE: From the amount determined under STEP TWO, subtract the amount determined under STEP FOUR.

STEP SIX: The amount determined on STEP FIVE, apply the appropriate depreciation percentage.

## SCHEDULE G (continued)

### Yard Improvements

#### Miniature Golf Courses

Typical cost per hole included plumbing but excluding building structures, fencing and parking areas.

Excellent installation, professionally designed	18,300
Good installation	12,200
Average quality installation	5,600
Low cost installation	2,700

#### Golf Driving Range

Typical cost per station, including station paving, normal fencing, but excluding building structures and parking areas

Excellent installation	5,600
Good installation	3,700
Average installation	2,800
Low cost installation	1,900

#### Artificial Turf

Per square foot, for football and baseball, including pad 10.30 to 13.10

#### Bleachers

Typical cost

Seats	Per Sq. Ft.*	Per Seat
Portable, steel frame, wood benches, outdoor Up to 800	15.40	48.00
Over 800	14.25	42.85
Permanent, wood frame and benches, outdoor Up to 1000	20.00	62.90
1000 to 2000	18.60	57.75
over 2000	17.40	53.20
Permanent, steel frame fiberglass benches, outdoor Up to 1000	31.00	97.55
1000 to 2000	28.80	89.50
over 2000	26.90	82.40
Add for roofed area	7.20 to	9.30

#### OUTDOOR STANDS OVER DRESSING ROOMS

Including finish and plumbing.

	Per S.F.*	Per Seat
Average wood seats, steel frame	64.85	203.90
Average steel seats, concrete or masonry walls	72.75	225.75
Average concrete seats, concrete or masonry walls	97.75	295.45
Add for roofed area; per sq.ft.	10.35 to	15.90

\*Square foot of projected horizontal area

#### Running Tracks

Per square foot

Gravel and cinder on stone base	1.20
Resilient paving, rubber cork base	
Plain	2.70
Colored	3.20
Rubberized asphalt, colored	3.30
Artificial resilient material, asphalt base	10.65

Typical cost for gravel with minimal requirements for 440 yard oval 21' wide, 24 x 750' long straight-away, including high jump, pole vault, broad jump, discus and hammer throw and shot-put facilities 78,000 to 98,000

Typical cost to include football field 154,000 to 194,000

#### Sports Stadium

Typical cost range per seating capacity (baseball capacity) for all structure improvements in-place.

Older type parks	1,270 to	1,510
Modern type parks	1,590 to	2,300
Enclosed, roofed stadiums, artificial turf, scoreboard	2,470 to	4,690

#### Tennis Courts

Typical cost range per court, 60 x 120 including fencing

	Standard	Deluxe
Clay surfaced court	31,300	46,300
Add per additional court	24,400	36,300
Asphalt surfaced court	31,800	50,100
Add per additional court	24,900	39,800
Sod surfaced court	31,600	48,100
Add per additional court	24,700	38,100
Add for lighting	9,100	11,500
Per additional court	4,600	5,800

#### Paddle Tennis Courts

Typical costs range per set, 54' x 55' deck with two 18'x39' playing courts, installed complete including deck and supports, accessories.

	Standard	Deluxe
Bituminous concrete deck, colored	30,000	38,200
Treated wood deck	35,400	46,400
Insulated steel deck	38,200	46,400

#### Scuffle Board Courts

Typical costs per court, 6' x 52' concrete 1,900 to 2,900

## SCHEDULE G (continued)

### Yard Improvements

#### Mobile Home Parks

##### General Specifications

##### EXCELLENT "A"

The excellent mobile home park provides deluxe accommodations for the largest single and double wide homes. It will have complete and various recreational facilities of top quality and feature generous amounts of landscaping, sprinkler systems, etc..

##### GOOD "B"

The typical good park is one catering to the larger, permanent mobile home. It will accommodate a limited quantity of double wides and will feature complete

##### AVERAGE "C"

This type of park is built more for permanent occupancy and will have spaces to accommodate the manufactured home up to sixty (60) feet but fewer, if any, double wide versions. They will have utility buildings, office and possibly recreational facilities, electrical costs include underground service and telephone to most sites as well street lighting.

##### LOW COST "D"

Developed for transient or semi-permanent occupancy, these parks usual have car-drawn trailer up to forty-five feet (45) long. They feature limited planning and facilities and have sewer or septic system hook-ups and water, but not gas hook-ups, except to utility buildings and electrical services is overhead.

##### CHEAP "E"

Typical of sites developed in outlying rural areas where there is minimal or no building code enforcement. There will be close spacing and a few facilities and are designed for smaller mobile homes. They feature water service to common hydrants with no trailer hook-ups.

##### COST PER SITE

Quality Grade	A	B	C	D	E
*Site Size (Sq. Ft.)	2700 - 5100	2000 - 4700	1700 - 3700	1000 - 2900	700 - 2400
**Cost Range (\$)	13100 - 14490	9440 - 11050	6200 - 7660	4240 - 5490	2170 - 3200
Components of above cost					
Engineering	1290 - 1430	960 - 1120	640 - 780	490 - 560	210 - 320
Site Grading	1240 - 1370	860 - 1020	540 - 680	350 - 450	170 - 250
Street Paving	1910 - 2110	1410 - 1650	930 - 1160	700 - 910	430 - 620
Patios and Walks	1650 - 1820	1080 - 1260	700 - 870	470 - 600	240 - 350
Sewers	1250 - 1380	1020 - 1200	770 - 960	560 - 720	330 - 490
Water	1220 - 1340	930 - 1090	640 - 780	470 - 600	270 - 400
Electric	2050 - 2260	1510 - 1770	1010 - 1250	690 - 890	360 - 530
Gas	780 - 890	560 - 650	350 - 430	210 - 280	- - -
Misc. (landscaping, recreation, facilities, Etc.)	1700 - 1890	1120 - 1300	620 - 770	360 - 480	160 - 240
Total	13100 - 14490	9440 - 11050	6200 - 7660	4240 - 5490	2170 - 3200

\*Site size refers to the average of the actual site on which the mobile home is situated, exclusive of access drives, recreation areas, and service areas.

\*\* The cost range per site includes all of the components shown above, naturally, if the sites being appraised do not include all of the above components, proper deductions should be made according to the above schedule.

NOTE: In appraising the mobile home parks through the use of this schedule, complete the following steps:

1. Enter the number of sites and proper rate in the SUMMARY OF IMPROVEMENTS section and calculate reproduction cost.

2. Apply proper depreciation considering age and condition (use residential guidelines)

3. Appraise other structures (i.e. garages, community rooms, laundry buildings, etc.) from appropriate schedules.

NOTE: This schedule is NOT to be used for recreational vehicle parks.

## SCHEDULE G (continued)

### Yard Improvements

#### Riverboat Cost Schedules

For Indiana property tax purposes, the reproduction cost of a riverboat licensed under IC 4-33 shall be computed in accordance with Schedule A or B in this section. Typical cost range per certified capacity for all structural components in-place. Certified capacity is the maximum persons capacity as prescribed by the regulations of the Coast Guard, Department of Transportation. For purpose of this section, certified capacity includes both passengers and crew.

#### SCHEDULE A

Riverboats licensed in counties contiguous to Lake Michigan:

Certified capacity of 4,500	81,800,000
More than 4,500 and	6500 per person
Less than 4,500, deduct	6500 per person

Example: A Lake Michigan riverboat has a certified capacity of 3,000 persons. The difference in capacity between the subject and the model is 1,500 people. To calculate the boat's reproduction cost, multiply the capacity difference of 1,500 by the per person cost and subtract it from the base as follows:

6,500	x	1,500	9,750,000
81,800,000	-	9,750,000	72,050,000

#### SCHEDULE B

Riverboats licensed in counties contiguous to the Ohio River:

Certified capacity of 4,500	81,800,000
More than 4,500 and	6,500 per person
Less than 4,500, deduct	6,500 per person

Example: An Ohio River riverboat has certified capacity of 5,000 persons. The difference in capacity between the subject and the model is 500 people. To calculate the boat's reproduction cost, multiply the capacity difference of 500 by person cost and add it to the base as follows:  
and add it to the base as follows:

6,500	x	500	3,250,000
81,800,000	+	3,250,000	85,050,000

#### Landfill Liners

The following schedule is to be used in assessing liners installed within landfills.

A landfill is a series of layers of special earth materials and plastic that is placed within the landfill cell to retain leachant within the structure and discourage subterranean water from infiltrating the cell. The rates given represents a composite build-up of the liner and can be used as either a system total or on a component basis depending on the subject landfill.

Once the subject's rate has been determined, multiply the desired rate by either the number of square feet or the acreage within each cell and calculate a depreciation percentage from the twenty (20) year life expectancy table. Record the true tax value as a sound value item in the "Summary on Improvements" section of the property record card.

The land value for the area underneath the cell should be valued at the commercial unusable undeveloped rate with a "floating one (1) acre" at the primary rate until the cell has been closed. After closure, the entire acreage of the cell is valued at the commercial useable undeveloped rate.

	Per S.F.	Per Acre
Compacted soil barrier (10" to 2	0.70	24000
Flexible membrane liner (60 mi.	0.50	17400
Geosynthetic clay liner blanket	0.55	19600
Sand drainage layer (12")	0.50	17400
Total	2.20	78400

Protective cover layer - part of unusable undeveloped rate.

## SCHEDULE G (continued)

### Yard Improvements

#### Commercial- Type Solar Heating and Cooling Systems Base Rates

For large commercial applications, multiple the system's total collector square feet by the following square feet base rates. To arrive at the system's correct reproduction cost, determine the rates from the schedule below by choosing a rate, listed to the nearest five thousand (5000) square feet, that is closest to the subject's system total area. Do not interpolate between rates.

Square Footage	Per S.F.
5000 to 10,000	115.15
15,000	86.10
20,000	71.55
25,000	62.80
30,000	57.00
35,000	52.85
40,000	49.73
45,000	47.35
50,000 and over	45.35

#### Geothermal Heating and Cooling

##### System Base Rates

##### HORIZONTAL CLOSED LOOP SYSTEMS

System Tonnage		HCLSWD w/distribution	HCLSWOD w/o distribution
2	Ton	10000	8700
2.5	Ton	12600	10800
3	Ton	15500	13000
3.5	Ton	18300	15200
4	Ton	21000	17400
5	Ton	26000	21700
6	Ton	31000	26000

##### VERTICAL CLOSED LOOP SYSTEM

System Tonnage		VCLSWD w/distribution	VCLSWOD w/o distribution
2	Ton	11800	10600
2.5	Ton	15100	13300
3	Ton	18300	15800
3.5	Ton	21600	18500
4	Ton	24800	21100
5	Ton	30800	26500
6	Ton	36700	31800

##### OPEN DISCHARGE OPEN LOOP SYSTEMS

System Tonnage		ODOLSWD w/distribution	ODOLSWOD w/o distribution
2	Ton	8600	7400
2.5	Ton	10800	9100
3	Ton	13100	10700
3.5	Ton	15500	12400
4	Ton	17800	14100
5	Ton	21900	17600
6	Ton	25800	20900

##### RETURN WELL OPEN LOOP SYSTEM

System Tonnage		RWOLSWD w/distribution	RWOLSWOD w/o distribution
2	Ton	9300	8100
2.5	Ton	11700	9800
3	Ton	14000	11500
3.5	Ton	16300	13300
4	Ton	18700	15000
5	Ton	22600	18300
6	Ton	26600	21700



## SPECIAL USE COMMERCIAL PROPERTY COST SCHEDULES

### Fast Food Restaurant Base Costs

Per square foot C- Grade Quality and design

Area	Cost	Area	Cost
700	133.85	2200	112.70
800	130.75	2300	112.10
900	128.15	2400	111.60
1000	126.00	2500	111.05
1100	124.05	2600	110.50
1200	122.40	2700	110.05
1300	121.00	2800	109.60
1400	119.70	2900	109.20
1500	118.50	3000	108.80
1600	117.50	3500	107.05
1700	116.50	4000	105.70
1800	115.65	4500	104.50
1900	114.85	5000	103.50
2000	114.05	5500	102.65
2100	113.40	6000	101.90

### Add for Basement per square foot

Area	Unfinished	Finished Open	Finished Divided
200	66.90	78.45	—
400	51.50	66.15	—
600	44.70	60.75	95.75
800	40.65	57.50	91.45
1000	37.85	55.25	88.45
1200	35.80	53.65	86.30
1400	34.20	52.35	84.60
1600	32.95	51.35	83.30
1800	31.90	50.50	82.15
2000	31.00	49.75	81.15
2200	30.25	49.15	80.35
2400	29.60	48.60	79.60
2600	29.00	48.15	79.00
2800	28.45	47.70	78.40
3000	27.90	47.30	78.00
3200	27.50	47.00	77.50
3400	27.10	46.65	77.10
3600	26.80	46.40	76.70
3800	26.45	46.10	76.40
4000	26.10	45.85	76.05
Add for canopies			24.48

### Quality Grade and Design Factors

To be applied to the C - Grade prices above

A	160	A
-1	150	
+2	140	
+1	130	
B	120	B
-1	115	
+2	110	
+1	105	
C	100	C
-1	95	
+2	90	
+1	85	
D	80	D
-1	70	
+2	60	
+1	50	
E	40	E

### Paving

Per square foot

See commercial yard paving rates

### Detached Canopies

Per square foot

Low cost installation	14.25
Average installation	18.40
Good installation	23.00
High Cost Installation, elaborate finish décor	31.75

Note: Solariums should be include in the base area and priced using the a appropriate

## SPECIAL USE COMMERCIAL PROPERTY COST SCHEDULES (continued)

### Stations with Service Bays

Per square for C - Grade quality and design.

Area	Cost	Area	Cost
600	107.70	1400	74.35
700	99.90	1500	72.45
800	93.90	1600	70.75
900	89.10	1700	69.20
1000	85.10	1800	67.85
1100	81.80	2000	65.40
1200	78.95	2200	63.35
1300	76.50	2400	61.65

NOTE: For drive-thru car wash bays see car wash building schedule.

### Stations without Service Bays

Per square foot C - Grade quality and design.

Area	Cost	Area	Cost
150	192.10	800	84.30
200	162.90	900	80.55
250	144.25	1000	77.45
300	131.20	1100	74.80
350	121.45	1200	72.50
400	113.90	1300	70.55
500	102.70	1400	68.85
600	94.85	1500	67.30
700	88.90	1600	65.95

Add for unfinished basements

Area	Cost	Area	Cost
200	61.95	1000	35.05
400	47.70	1200	33.15
600	41.40	1600	30.50
800	37.65	--	--

Add for attached canopies, per square foot.

Typical steel frame including soffits and lighting 18.95

Typical unfinished wood frame including lighting 8.55

### Public Restroom Building

Per square foot.

Area	Cost	Area	Cost
125	137.10	800	96.65
150	131.30	900	95.10
200	123.10	1000	93.80
250	117.50	1100	92.70
300	113.40	1200	91.80
400	107.60	1300	90.95
500	103.65	1400	90.15
600	100.70	1500	89.45
700	98.40	1600	88.85

### Paving

Per square foot.

see commercial yard paving rates

### Quality Grade and Design Factors

To be applied to the C -Grade prices above.

A	160			-1	95	
	-1	150		+2	90	
	+2	140		+1	85	
	+1	130	D		80	
B	120			-1	70	
	-1	115			+2	60
	+2	110			+1	50
	+1	105	E		40	
C	100					

### Detached Canopies

Per square foot.

Includes lightening, soffits and support

	Steel	Wd. Frame and Sheath
Low Cost Installation.	15.80	7.35
Average Quality	20.15	9.05
Good Quality Installation	25.50	11.05
High Cost Elaborate Installation	32.20	13.40

Add 25% for round canopy.

### Self - Service Cashier Booths

LOW COST

Per square foot

Open style booths,  
minimum elect.,  
no plumbing

Area	Cost
25	158.25
50	116.80
75	98.40
100	87.50
125	80.00
150	74.55
175	70.25
200	66.80
225	63.90
250	61.50
275	59.45
300	57.60

AVERAGE (STEEL)

Per square foot

Typical cashier booth,  
good elect.,  
no plumbing

Area	Cost
50	231.95
75	183.10
100	153.95
125	134.10
150	119.40
175	108.00
200	98.80
225	91.20
250	84.75
375	62.85
300	74.35

Add 25% for bullet-proof glass.

Add for plumbing.

GOOD (STEEL)

Good security structure  
with bullet-proof glass.  
and 2 plumbing fixtures

Area	Cost
75	328.50
100	275.20
125	238.85
150	211.95
175	191.10
200	174.30
225	160.40
250	148.60
275	138.45
300	129.60

Add/deduct for plumbing 1600 per fixture

Add for intercom system 470